



INVITATION LETTER

Package Code: TEQIP-III/2019/ntst/119

Current Date: 11-July-2019

Package Name: NITS/TEQIP-III/EEE/02

Method: Shopping Goods

Sub: INVITATION LETTER FOR NITS/TEQIP-III/EEE/02

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure-I:

S. No.	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	Linear Double Inverted Pendulum System	01	NIT Sikkim	YES
2	Rotary Double Inverted Pendulum System	01		

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme (TEQIP) - Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. **Qualification Criteria:**

The bidder/supplier should have:

- 3.1. Enclosed an EMD (Earnest Money Deposit) of Rs. 1,00,000/- (Rupees One Lakh Only) in favour of The Director NIT Sikkim in the form of Demand Draft (DD) drawn on any commercial bank payable at Ravangla/Gangtok.
- 3.2. A minimum of 3 years experience of supplying similar items, substantiated by relevant documents.
- 3.3. An average annual turnover of Rs.30 Lakh in last three years.
- 3.4. Not been blacklisted by any Govt. Institution/Organization.

4. **Quotation:**

- 4.1. The contract shall be for the **full quantity** as described above.
- 4.2. The vendors are requested to quote lowest rate for the supply of all the items in the prescribed **Format for Quotation Submission (Annexure-III)**.
- 4.3. Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
- 4.4. All duties and other levies payable by the supplier under the contract shall be included in the unit Price.

- 4.5. Applicable taxes shall be quoted separately for all items.
- 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 Workstation (Computer). 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. The concessional rate of GST is 5%. (Annexure–II, DSIR Certificate)**
- 4.6. The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 4.7. The Prices should be quoted in Indian Rupees only.
- 4.8. The vendor should submit trade licence/certificate of Registration (as applicable) in the required business/field, GST registration number and photocopy of the GST registration certificate, the PAN of proprietor/firm/ company with photocopy of the PAN card. Please attach a certificate that the quoted price is not more than that of any govt. organization/Institute in India. This has to be mention in the offer letter clearly.
5. Each bidder shall submit only one quotation.
6. Quotation shall remain valid for a period not less than **45** days after the last date of quotation submission.
7. The quotation should include the following information:
- 7.1. Authorization certificate from the OEM/Principal assuring full guarantee and warrantee obligations during the liability period, for the goods offered.
 - 7.2. The list of clients (IITs, NITs/Central Universities and other reputed Institution) duly supported by copies of purchase order.
 - 7.3. Details of service/supports centres located in India.
8. **Evaluation of Quotations:** The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which:
- 8.1. are properly signed; and
 - 8.2. Confirm to the terms and conditions, and specifications.
 - 8.3. The vendor should provide complete technical details (printed literature of the manufacturer along with model/make) and the same should be verifiable from the website of the vendor/OEM. Mere copying the technical specification provided in the Annexure-I may lead to cancellation of the bid.
 - 8.4. The Institute reserves the right for pre-inspection of the goods/equipment quoted by the vendor.
9. The Quotations would be evaluated for all items together.
10. **Award of Contract:** The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.

- 10.1. Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.
- 10.2. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be incorporated in the purchase order.
11. Performance Bank Guarantee: Performance Security has to be submitted by the successful bidder. A Bank guarantee issued by a Nationalized Bank in India towards PBG for an amount equal to 5% of total order value of purchase order and valid till the period of beyond the 2 months of completion of warranty period should be submitted in favour of **Director NIT Sikkim**. In case, the vendor fails to provide satisfactory service, the PBG is liable to be forfeited.
12. Payment shall be made in Indian Rupees as follows:
Satisfactory Delivery & Installation - 70% of total cost
Satisfactory Acceptance - 30% of total cost
13. Liquidated Damages will be applied as per the below:
Liquidated Damages per Day Min %: 0
Liquidated Damages Max %: 10
 - (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;
14. **All supplied items are under onsite warranty for 3 years from the date of successful acceptance of items.**
15. You are requested to provide your offer latest by **17:30** hours on **02-Aug-2019**.
16. Detailed specifications of the items are at **Annexure-I**.
17. Training Clause (if any): **YES**
18. Testing/Installation Clause (if any): **YES**
19. Performance Security shall be applicable: **5%**
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. Performance 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.
20. Information brochures/ Product catalogue must be accompanied with the quotation clearly indicating the model quoted for.

21. The vendors should submit the technical and financial bids in a sealed envelope. Sealed quotation to be submitted/ delivered at the address mentioned below:

**The Nodal Office (Procurement),
TEQIP-III,
National Institute of Technology Sikkim,
Barfung Block, Ravangla, South Sikkim
Pin Code-737139**

22. We look forward to receiving your quotation and thank you for your interest in this project.



**Dr. Achintesh N. Biswas
Nodal Officer (Procurement)**

(Annexure – I)

1. Linear Double Inverted Pendulum System

Quantity	Description of Items
1 (One)	<p>Objective: The objective of this laboratory is to design a control system to balance a linear double-pendulum, while tracking a desired linear servo cart position. Students will learn how to obtain a state space representation of open loop system and design a state-feedback controller to balance a double pendulum, while tracking the linear servo cart position. Related applications of this experiment include stabilizing the takeoff of a multi-stage rocket and modelling the human posture system.</p> <p><u>Linear Servo Base Unit</u></p> <p>Features:</p> <ul style="list-style-type: none"> • Easily interchangeable add-on modules • High quality DC motor and gearbox • High resolution optical encoders to sense position • Robust machined aluminum casing • Easy-connect cables and connectors • Fully compatible with MATLAB®/Simulink® and LabVIEW™ • Fully documented system models and parameters provided for MATLAB®/Simulink®, LabVIEW™ and Maple™ • Open architecture design, allowing users to design their own controller <p>Technical Specifications:</p> <ul style="list-style-type: none"> • Rack Dimension (L x W x H): 102 cm x 15 cm x 6 cm approx • Cart mass: 0.6 kg approx • Cart weight mass: 0.4 kg approx • Motor nominal voltage: 6 V • Motor maximum continuous current (recommended): 1 A • Motor maximum speed (recommended): 6000 RPM • Planetary gear box ratio: 3.71 • Encoder resolution (in quadrature): 4096 counts/rev <p>Workstation:</p> <ul style="list-style-type: none"> • Compatible 2 Channel Data Acquisition Board (minimum) • Linear Voltage Controlled power Amplifier • Real-Time control software for MATLAB®/Simulink® and LabVIEW™ • Instructor and students manual • Complete dynamic model • Simulink® pre-designed controllers • LabVIEW™ pre-designed controllers <p><u>Linear Double Inverted Pendulum Module</u></p>

	<p>Features:</p> <ul style="list-style-type: none"> • Module easily attaches to front shaft of Linear Servo Base Unit • Two pendulum sizes supplied: medium and long • High resolution optical encoders to sense pendulum angle • Easy-connect cable and connectors (on the Linear Servo Base Unit) • High quality aluminium and precision-crafted parts • Fully compatible with <u>MATLAB®/Simulink®</u> and <u>LabVIEW™</u> • Fully documented system models and parameters provided for <u>MATLAB®/Simulink®</u> and <u>LabVIEW™</u> • Open architecture design, allowing users to design their own controller <p>Technical Specifications:</p> <ul style="list-style-type: none"> • Mass of linear double pendulum assembly: 0.364 kg • Medium pendulum mass (with T-fitting): 0.13 kg approx • Medium pendulum length (pivot to tip): 34 cm approx • Short pendulum mass (with T-fitting): 100 gms approx • Short pendulum length (pivot to tip): 20.0 cm • Mass of encoder hinge: 0.14 kg • Hinge encoder resolution (in quadrature): 4096 counts/rev <p>Workstation:</p> <ul style="list-style-type: none"> • Compatible 2 Channel Data Acquisition Board (minimum) • Linear Voltage Controlled power Amplifier • Real-Time control software for <u>MATLAB®/Simulink®</u> and <u>LabVIEW™</u> • Instructor and students manual • Complete dynamic model • <u>Simulink®</u> pre-designed controllers • <u>LabVIEW™</u> pre-designed controllers
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2. Rotary Double Inverted Pendulum System

1 (One)	<p>Objective:</p> <p>The objective of this experiment is to design a control system that balances a rotary double inverted pendulum and positions the rotary arm to a commanded angular position. Based on the Two Degrees of Freedom (2 DOF) Robot workstation, the Rotary Double Inverted Pendulum module offers the student a simple way to understand the advanced pendulum problem. The student will learn to balance two vertical rods by manipulating the angle of the base. Students will use this module to learn practical problem-solving skills for mechanical and aerospace engineering while designing a controller that maintains the pendulum in an upright position.</p> <p><u>Rotary Servo Base Unit</u></p> <p>Features:</p>
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- Add-on modules are easily interchangeable
- High quality DC motor and gearbox
- High resolution optical encoders to sense position
- Continuous turn potentiometer to sense position
- Tachometer to Sense Motor Speed
- Robust machined aluminium casing with stainless steel gears
- Variable loads and gear ratios
- Optional slip ring for continuous measurement from instrumented modules
- Fully documented system models and parameters provided for MATLAB®, Simulink®, LabVIEW™ and Maple™
- Easy Connect Cables and Connectors
- Open architecture design, allowing users to design their own controller

Specifications:

- Plant Dimensions (L x W x H) :15 x 15 x 18 cm³
- Nominal Voltage: 6 V
- Motor Maximum Continuous Current (recommended): 1 A
- Motor Maximum Speed (recommended): 6000 RPM
- Potentiometer Bias Power: ±12 V
- Potentiometer Measurement Range: ±5 V
- Tachometer Bias Power: ±12V
- Tachometer Measurement Range: ±5V
- Tachometer Sensitivity: 0.0015V/RPM
- Encoder Resolution: 4096counts/rev.
- Gear Ratio (high gear configuration): 70
- Plant Weight: 1.2 Kg

Workstation:

- Compatible 2 Channel Data Acquisition Board (minimum)
- Linear Voltage Controlled power Amplifier
- Real-Time control software for MATLAB®/Simulink® and LabVIEW™
- Instructor and students manual
- Complete dynamic model
- Simulink® pre-designed controllers
- LabVIEW™ pre-designed controllers

Rotary Double Inverted Pendulum Module

Technical Specifications:

- Rotary arm length (pivot to tip): 22 cm (approx)
- Rotary arm mass: 0.26 kg (approx)
- Short pendulum mass (with T-fitting): 100 gms (approx)
- Short pendulum length (from pivot to tip): 20.0 cm
- Medium pendulum mass (with T-fitting): 0.13 kg (approx.)
- Medium pendulum length (from pivot to tip): 34 cm (approx)
- Mass of Encoder Hinge located between the Lower and Upper Pendulum: 0.14 kg (approx.)

Features:

- High quality aluminium chassis with precision-crafted parts

- Double pendulum comprised of a 7-inch aluminium link connected to a 12-inch link
- Rotary Double Inverted Pendulum module easily attaches to the Rotary Servo Base Unit
- High resolution encoders sense rotary arm and pendulum link angles
- Fully documented system models & parameters provided for MATLAB®, Simulink® and Maple™
- Easy-connect cables and connectors
- Open architecture design, allowing users to design their own controller
- High resolution encoders sense rotary arm and pendulum link angles

Workstation:

- Compatible 2 Channel Data Acquisition Board (minimum)
- Linear Voltage Controlled power Amplifier
- Real-Time control software for MATLAB®/Simulink®
- Instructor and students manual
- Complete dynamic mode
- Simulink® pre-designed controllers
- LabVIEW™ pre-designed controllers

DSIR Certificate

सूचना का
अधिकार
RIGHT TO
INFORMATION

दूरभाष/TEL : 26962819, 26567373
(EPABX) : 26565694, 26562133
: 26565687, 26562144
: 26562134, 26562122
फैक्स/FAX : 26960629, 26529745
Website : <http://www.dsir.gov.in>
(आईएसओ 9001:2008 प्रमाणित विभाग)
(AN ISO 9001:2008 CERTIFIED DEPARTMENT)



सत्यमेव जयते

भारत सरकार
विज्ञान और प्रौद्योगिकी मंत्रालय
वैज्ञानिक और औद्योगिक अनुसंधान विभाग
टेक्नोलॉजी भवन, नया महरौली मार्ग,
नई दिल्ली - 110016
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
Department of Scientific and Industrial Research
Technology Bhavan, New Mehrauli Road,
New Delhi - 110016

सं० टीयू/वी/आरजी-सीडीई/ (1199)/2016

दिनांक: 17-03-2017

महोदय/महोदया,

यह आपके पत्र/आवेदन दिनांक 27-01-2017 के संदर्भ में है जिसमें सरकारी अधिसूचना सं० 51/96 सीमा शुल्क दिनांक 23.7.1996 के अनुसार सीमा शुल्क/केन्द्रीय उत्पाद शुल्क छूट तथा सरकारी अधिसूचना सं० 10/97-केन्द्रीय उत्पाद दिनांक 01.03.1997 के अनुसार केन्द्रीय उत्पाद शुल्क छूट प्राप्त करने, जिसे समय-समय पर संशोधित किया जाता है, के प्रयोजन से सार्वजनिक निधीयत अनुसंधान संस्थाओं अथवा विश्वविद्यालय अथवा भारतीय प्रौद्योगिकी संस्थान अथवा भारतीय विज्ञान संस्थान, बंगलौर अथवा क्षेत्रीय अभियांत्रिकी महाविद्यालय, अस्पताल के अलावा, के पंजीकरण/पंजीकरण के नवीकरण का अनुरोध किया गया है।

इस संबंध में, आपके संदर्भ तथा उपयोग के लिए निम्नलिखित दस्तावेज संलग्न हैं:-

1. पंजीकरण प्रमाण पत्र
2. नियम एवं शर्तें

भवदीया,

कामिनी
(कामिनी मिश्रा)

वैज्ञानिक - एफ/निदेशक



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नई दिल्ली - 110016
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
Department of Scientific and Industrial Research
Technology Bhavan, New Mehrauli Road,
New Delhi - 110016



No. TU/V/RG-CDE(1199)/2016

Dated : 17th March, 2017

To,
The Director
National Institute of Technology Sikkim
Barfung Block, Ravangla Sub-Division,
South Sikkim - 737 139
Sikkim

Subject: Renewal of Registration of Public Funded Research Institutions or a University or an Indian Institute of Technology or Indian Institute of Science, Bangalore or a Regional Engg. College, other than a Hospital*, for the purposes of availing Customs duty exemption in terms of Govt. Notification No. 51/96-Customs dated 23.07.1996 & 28/03-Customs dated 01.03.2003 and Central Excise Duty Exemption in terms of Govt. Notification No. 10/97-Central Excise dated 01.03.1997 & 28/13-Central Excise dated 01.10.2013 as amended from time to time.

With Reference: Your application dated 27 January, 2017 on the above subject, this is the certificate of registration

CERTIFICATE OF REGISTRATION

This is to certify that **National Institute of Technology Sikkim, Sikkim** is registered with the Department of Scientific and Industrial Research (DSIR) for purposes of availing customs duty exemptions in terms of Government Notification No. 51/96-Customs dated 23 July, 1996 and Central Excise duty exemption in terms of Government Notification No. 10/97-Central Excise dated 1 March, 1997 as amended from time to time, for research purposes only. The Registration is subject to terms and conditions mentioned overleaf.

This Registration is valid upto **31.08.2021**.

Please acknowledge the receipt.

Yours faithfully,

Kamini Mishra
(K. Mishra)

Scientist - 'F' / Director

* Certificate of registration is not valid for activities falling within the definition of "hospital" as per notification no. 51/96 – Customs dated 23-07-1996 and No. 10/97 – Central Excise dated 01-03-1997 issued by the Department of Revenue. The institutions are cautioned to go through the notifications before availing duty exemptions under these notifications.

Terms and conditions for registration of public funded research institutions, etc., other than a hospital for the purposes of availing customs/central excise duty exemption in terms of Govt. notifications no.51/96-customs dt.23.7.1996 and no.10/97-central excise dt.1.3.1997 as amended from time to time.

01. The institution should acknowledge receipt of the registration letter by stating that they will abide by the terms and conditions of registration.
02. The registration would be valid for the period specified in the registration letter**. Request for renewal of registration shall be made in the prescribed proforma, at least 3 months before the expiry of the valid registration. Applications received late may not be considered.
*** However, certificate of registration is not valid for activities falling within the definition of 'hospital' as per notification no. 51/96-Customs dated 23.07.1996 and No. 10/97-Central Excise dated 01.03.1997 issued by the Department of Revenue. The institutions are cautioned to go through the notifications before availing duty exemptions under these notifications.*
03. Brief summary of the R&D activities, status of on-going projects and achievements of the institution shall be submitted to the DSIR at the end of 5(five) years, in case of institution where validity of registration is 10(ten) years. This should include details related to papers published, patents obtained and processes developed, new products introduced, awards & prizes received and copy of the latest Annual Report.
04. The institution should have a broad based research advisory committee (RAC), which should meet at regular intervals for approving, guiding and monitoring the ongoing and future research projects.
05. The institution should have separate budget for research. The institution should utilise the duty exemption facility as per the above-mentioned notifications, for research purposes only. Non-research requirement such as the one for service activities, teaching, training, patient care, etc. should not be procured availing the facility.
06. DSIR will not be responsible for any misuse of the duty exemptions facility using this certificate. The onus of proving that duty exemptions has been availed for research purpose only lies with the Institution.
07. The institutions should introduce a chapter in its Annual Report dealing with the research & development work. This could contain the on-going research projects, achievements during the year, publications, patents if any, etc. The R&D income & expenditure should be separately shown in an annexure/schedule in the statement of accounts in the Annual Report.
08. The registration will entitle the institutions to avail customs/excise duty exemption on purchase of equipment, instruments, spares thereof, consumables etc. used for research & development subject to relevant Government policies in force from time to time. Such exemptions will have to be separately applied for in the prescribed formats. The institutions should also abide by the terms & conditions of the customs & central excise notifications issued/amended from time to time.
09. In case of disposal/sale of R&D equipment, clearance from customs/excise authorities will also be required in view of the applicable notifications under which the equipment was imported /purchased in India.
10. The institution should submit half-yearly returns of the imports and domestic purchases in the month of January and July every year in the proforma issued by DSIR along with details of items, their value & utilisation.
11. Any violation of the terms & conditions mentioned above and/or provisions of taxation in force will make the institution liable to de-registration.
12. The institution will also conform to such other conditions for registration stipulated in the Guidelines, as may be specifically provided in the registration letter and notices placed on department official website (<http://www.dsir.gov.in>) from time to time.

* * * * *

(Annexure-III)

FORMAT FOR QUOTATION SUBMISSION

(In letterhead of the supplier with seal)

Date:

To,

.....

Sl.No.	Description of goods\ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	GST and other Taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs.

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. (Amount in figures)
 (Rupees amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name:

Address:

Contact No.: