



National Institute of Technology, Nagaland, Chumukedima,
Dimapur, Nagaland-797103

INVITATION LETTER

Package Code: TEQIP-III/nitn/54
Package Name: SURFACE/CONTACT ANGLE
MEASUREMENT

Current Date: 18-July-2019
Method: Shopping Goods

Sub: INVITATION LETTER FOR SURFACE/CONTACT ANGLE MEASUREMENT

Sir/Madam,

1. You are invited to submit your most competitive Sealed Quotations for the following goods with item wise detailed specifications given at Annexure I,

| Sr. No | Item Name | Quantity | Place of Delivery | Installation Requirement (if any) |
|--------|---|----------|-------------------|-----------------------------------|
| 1. | Surface/Contact Angle Measurement (Detailed specifications given at Annexure I) | 1 | NIT Nagaland | Yes |


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. Quotation

- 3.1 The contract shall be for the full quantity as described above.
- 3.2 Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
- 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit price
- 3.4 Applicable taxes shall be quoted separately for all items.
- 3.5 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.

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- 3.6 The Prices should be quoted in Indian Rupees only. Goods/Equipments should be brand new.
4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **60** days after the last date of quotation submission.
6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be substantially responsive i.e. which
- 6.1 are properly signed; and
 - 6.2 Confirm to the terms and conditions, and specifications.
7. The Quotations would be evaluated for all items together
8. 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.
- 8.1 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.
- 8.2 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.
9. Payment shall be made in Indian Rupees as follows:
- Delivery and Installation - 90% of total cost**
 - Satisfactory Acceptance - 10% of total cost**
10. Liquidated Damages will be applied:
- Liquidated Damages Per Day Min %: 0
 - Liquidated Damages Max %: 0
11. All supplied items are under warranty of **Twelve (12)** months from the date of successful acceptance of items.
12. You are requested to provide your offer latest by **12:00** hours on **01-Aug-2019**.
13. Detailed specifications of the items are at Annexure I.


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14. Training Clause (if any) **Yes**
15. Testing/Installation Clause (if any) **Yes**
16. Information brochures/ Product catalogue, if any must be accompanied with the quotation clearly Indicating the model quoted for
17. The tender document shall be submitted/delivered in a sealed envelope bearing the following reference on the top left corner: **Package Code: TEQIP-III/nitn/29 Dated: 18-07-2019** latest by **12:00** hours on **01-Aug-2019** and addressed to:
The Registrar, National Institute of Technology, Nagaland, Chumukedima, Dimapur, Nagaland-797103.
18. The bidder should furnish the certificate of GST registration, PAN, and IT Returns of last three years.
19. The Bidder should have experience of executing at least 3 (Three) Purchase Order of Equipment/Machines from any IITs /NITs/ Central Govt. Institutions or Educational & Research Institutions of National Repute.
20. Vendors should clearly state the available nearest after sales service facilities in the region, without which their offers will be rejected.
21. The bidder should be the manufacturer or authorised dealer and, in such case, the certificate of dealership from the manufacturer should be produced.
22. **Performance Bank Guarantee (PBG):** The supplier shall furnish an unconditional PBG for 5% of the Purchase Order value for a period of one year from a scheduled Bank of India, within 21 days from the date of delivery and installation of the work. Where the PBG is obtained by a foreign bank, it shall be got confirmed by a Schedule Indian bank and shall be governed by Indian Laws and be subject to the jurisdiction of courts at Dimapur. The PBG shall guarantee that,
 - a) The Vendor guarantees satisfactory operation of the Equipment & components against poor workmanship, bad quality of materials used, faulty designs and poor performance.
 - b) The Vendor shall, at his own cost, rectify the defects/replace the items supplied, for defects identified during the period of guarantee.
23. The bidder should produce Audited statement of accounts for the last 3 years.
24. **Disputes and Jurisdiction:** Any legal dispute arising out of any breach of contract pertaining to this order shall be settled in the court of competent jurisdiction located within Dimapur in Nagaland.



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25. **All the supporting documents should be attached with the quotation, without which the tender will be completed rejected.**

26. The Institute reserves the right to accept in part or in full any quotation(s) or reject any or more quotation(s) without assigning any reason or to cancel the tendering process and reject all quotation(s) at any time prior to award of contract, without incurring any liability, whatsoever to the affected bidder or bidder(s).

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



TEQIP-III COORDINATOR

18-07-2019

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Annexure I

| Sr. No | Item Name | Qty | Specifications |
|--------|-----------------------------------|-----|--|
| 1. | Surface/Contact Angle Measurement | 1 | <p>Technical Specification Contact Angle Meter Contact Angle System for fully automatic measurements of contact angle, Surface Free Energy and surface & interfacial tension of liquids based on Pendent drop method.</p> <p>Measuring system: Automatic Contact Angle measurement system based on Image analysis through CCD camera</p> <p>Measurement Method: Sessile Drop, Pendant Drop, Extension/contraction, Sliding/tilting angle</p> <p>Analysis System: $\theta/2$ method, Tangent method, Circle fitting, Ellipse Fitting</p> <p>Measuring Range: 0 - 180degrees</p> <p>Resolution: 0.01°</p> <p>Accuracy: 0.2°</p> <p>Camera: High resolution and high speed 333fps USB 3.0 camera</p> <p>Field of view: 3 steps zoom (width 6.6mm, 11.8mm, 17.0mm)</p> <p>Sample Stage Size: 150w x 150d mm</p> <p>Applicable Sample: 150mm x 150mm, Thickness 35mm, weight 400g</p> <p>Stage Movement: X-Y-Z</p> <p>Droplet Dispensing: Automated dispenser perform discharging regular volume in 1 μl per second by pre-set in the software for advancing & receding Contact angle study as well as surface free energy analysis</p> <p>Reference Standard: for pixel calibrating the Instrument standard Droplet for Sessile should be provided</p> <p>Contact Angle Meter should be upgradable in future and should quote followings below</p> <p>optional accessories;</p> <p>i) Surface Free Energy Kit: 5 Liquid for Surface energy calculation should be provided to measuring Surface Free energy automatically</p> <p>ii) Pendant Drop Kit: For measurement of interfacial tension between liquid viscous liquid and molten polymer etc.</p> <p>iii) Heater type stage: For contact angle measurement, stage for temperature control of solid surface Temperature controller of heater type stage, chamber and dispenser by pre- set temperature automatically from 0~400°C</p> <p>iv) Heater Type Dispenser: use to control temperature of liquids samples or heat the liquid by pre- set temperature automatically from 0~400°C</p> <p>v) Multi dispenser system: Automatic dispenser controlled by computer should be minimum 3 dispensers and optionally up to 5</p> |



| | | |
|--|--|---|
| | | <p>dispensers; for convenient use for measurement requiring a number of samples such as surface free energy analysis.</p> <p>vi) Heater type chamber: For interfacial tension measurement for use to control circum-temperature of pendant drop as interfacial tension measurement automatically from 0~400°C</p> <p>vii) Sliding/Tilting Angle: The sliding angle measurement for evaluation of adhereability and exfoliation between solid and liquid by setting the main body of contact angle meter on Tilting Table. The Tilting table should be built into the system and same original manufacture and the control is totally through the software and when the table is tilted, the camera is also getting tilted in the same angle so that even fine slide of droplet ends can be recognized to determine Sliding Angle and get the true Contact Angle at any given time. The software can do is collect information of Sliding Angle (Angle of slop that droplet starts sliding), Advancing Angle, Receding Angle, and Adhesive Energy between droplet and solid as a reference of hydrophobicity and data should be obtained with desired speed from 0.1°/sec - 10°/sec.</p> |
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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) | Sales tax 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: _____


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