

राष्ट्रीय प्रौद्योगिकी संस्थान पुदुच्चेरी
थिरुवैत्ताकुड़ी, कारैक्काल – 609 609
NATIONAL INSTITUTE OF TECHNOLOGY PUDUCHERRY
Thiruvettakudy, Karaikal – 609 609
Union Territory of Puducherry



Tender Document

for

Supply of Non Destructive Ultrasonic Thickness Measurement Kit,
Ultrasonic Interferometer for Solids, Ultrasonic Interferometer for
Liquids, etc.,

Tender Enquiry No.: NITPY/PHY/2016-17/LAB-06 Dated: 28.01.2017

at

National Institute of Technology Puducherry
Thiruvettakudy, Karaikal – 609 609
Union Territory of Puducherry
India.

National Institute of Technology Puducherry @ Karaikal an autonomous Institute established under Ministry of Human Resource Development, Government of India would like to procure the following items

Item	:	Supply of Non Destructive Ultrasonic Thickness Measurement Kit, Ultrasonic Interferometer for Solids, Ultrasonic Interferometer for Liquids, etc., (Specifications enclosed in SECTION : 3)
Tender Enquiry No	:	NITPY/PHY/2016-17/LAB-06 Dated: 28.01.2017
Due Date (For submission of bids)	:	28-02-2017 at 3:00 PM
Technical Bid Opening time	:	28-02-2017 at 4:00 PM
EMD	:	The bidders shall furnish, as part of his bid, a Earnest money deposit (EMD)/ Bid security for an amount of Rs.10,000/- should be paid through online State Bank Collect mode under the payment category of Administrative Miscellaneous https://www.onlinesbi.com/prelogin/icollecthome.htm . The EMD or Performance security will bear no interest whatsoever. The copy of the payment receipt should be enclosed along with the Technical bid of tender document. EMD exemption is applicable to bidders registered with NSIC.
Eligibility Criteria	:	The Contractors / Tenderers should have experience in supply of similar item with ONE similar work of Rs.2,00,000/- or above (or) TWO similar works each of Rs.1,50,000/- (or) above executed during the last 3 years with reputed educational institutions, organizations, etc., along with the copy of orders.
Submission of Offer	:	<u>Two Bid System:</u> Two bid system will be followed for this tender. In this system the bidder must submit his offer in two separate sealed envelopes . Both the technical bid and commercial bid envelopes should be securely sealed and stamped separately and clearly marked as “Envelope No : 1 – Technical Bid” and “Envelope No : 2 – Commercial Bid” respectively. EMD should be placed in the Envelope No : 1, Technical Bid.
Place of Submission	:	The Registrar (i/c) National Institute of Technology Puducherry Thiruvettakudy, Karaikal – 609 609 Union Territory of Puducherry India.

INSTRUCTIONS TO BIDDERS

1. This document set contains the following:
 - a) Terms and conditions of the Tender
 - b) Details of the Firm offering this Quote
 - c) Technical Compliance Form
 - d) Quotation form (Price Bid)
 - e) Currency Form (quoted on behalf of the foreign suppliers)
 - f) NIT Puducherry's check list copy
2. The bidder's copy is for your future records. **Please fill in and return only NIT Puducherry's copy.**
3. The bidder should give details of their technical soundness and provide list of customers of previous supply of similar items to Universities, Institutes or Government Departments / Undertakings/public sectors with contact details. The details of the agency / profile should be furnished along with the copy of all related documents.
4. Read through the terms and conditions given and affix your signature and seal if you find them acceptable. Any deviations may be recorded. Read carefully list of specifications that we have enclosed.
5. Fill in the questionnaire regarding the Firm.
6. The downloaded documents 'Technical Compliance Form' and 'Quotation Form (Price Bid)' should be TYPE WRITTEN USING CAPITAL LETTERS ONLY. At the time of filling the "Quotation Form (Price Bid)" make sure that you have not missed anything. Specify the model number & specification for each item. The form should be filled item-wise. Do not leave blank fields. If you are not quoting for a specific item, you should specify "NOT QUOTING".
7. Do not use ambiguous terms like "yes", "complied" or "available". Specifically mention the matching specification of the product offered by you. Make sure that all the documents should be duly signed by you with date and seal.

CHECKLIST TO BE FILLED IN BY BIDDER	
List of documents to be enclosed	Completed & Signed
1. Terms and Conditions form	YES / NO
2. Details of the Firm offering this Quote	YES / NO
3. NIT Puducherry's Quotation form (Technical & Price Bid)	YES / NO
4. Currency Form(quoted on behalf of the foreign suppliers)	YES / NO
5. Other technical specifications & pamphlets	YES / NO

- Note:** 1. "Cover" should contain the following:
- a. Form of "**Acceptance of Terms and Conditions**".
 - b. Form of "**Firm details**"
 - c. Pamphlets, if any (in a separate sealed cover)
 - d. Quotation Form (Technical, Price Bid and Currency Form)

Please retain this page with you for your future reference

SECTION: 1 TWO BID TENDER

NIT Puducherry Copy

Envelope 1:

EMD :

The bidders shall furnish, as part of his bid, a Earnest money deposit (EMD)/ Bid security for an mentioned amount should be paid through online State Bank Collect mode under the payment category of Administrative Miscellaneous <https://www.onlinesbi.com/prelogin/icollecthome.htm>. The EMD or Performance security will bear no interest whatsoever. The copy of the payment receipt should be enclosed along with the Technical bid of tender document.

EMD exemption is applicable to bidders registered with NSIC.

Technical Bid :

(should be superscribed as 'Technical Bid' duly indicating the Tender reference No. and the due date of opening)

Should contain:

- a. Technical pamphlets
- b. Detailed technical specification
- c. Copy of license certificate for manufacture/supply of the item*
- d. Income Tax PAN number & TIN number.*
- e. Last three years balance sheet approved by the CA and the IT clearance certificate.*
- f. Warranty period offered for the tendered item to be specified. If the warranty period is not conforming with the schedule of requirements given in section 3 of the Tender document, the bid is liable to be treated as non-responsive and will be rejected.
- g. Duly filled up technical questionnaire, if any
- h. Duly filled up deviation schedules to technical specifications, if any
- i. Copy of supply orders completed during the last three years

* Appropriately pertaining to the country of origin.

Envelope 2: Price Bid

(should be superscribed as 'Price Bid' duly indicating the Tender reference No. and the due date of opening)

Should contain:

- a. Price bid as per the format in Section-4 of the tender document
- b. Break-up price as per the format in Annexure-A

Note:

- a. If the prices are revealed in cover 1 or in cover 2, the offer will be summarily rejected.
- b. Each Cover shall be sent in a double sealed cover. The inner covers (Cover 1, Cover 2 and Cover 3) should be sealed individually with the Sellers's distinctive seal and superscribed with the tender reference No. and due date of opening. All inner covers shall be placed in a common outer cover which shall also be sealed with seller's distinctive seal and superscribed with the tender reference No. and due date of opening.

SECTION: 2 TERMS AND CONDITIONS FORM

1. The bidders are asked to give detailed quotation in their own forms in two separate bids.

Part -1: Technical Bid

Part-2: Commercial Bid

2. Quotations, which are submitted without two bids will summarily be rejected.
3. The tender document can be downloaded from National Institute of Technology Puducherry. Website: www.nitpy.ac.in
4. **Technical Evaluation Committee**
 - i) A committee duly constituted by The Registrar (i/c), NIT Puducherry will go through the technical aspects of the tender and recommend short listed firms. The recommendation of the technical committee shall be final and binding on all the parties.
 - ii) The technical committee will examine all the technical aspects of the bids received. Further, the technical committee may seek additional information from the existing users at NIT Puducherry or from other Institutes and also call for technical presentations from the bidders if required.
 - iii) The bidders are required to submit the sample for evaluation before the stipulated time.
 - iv) No cost will be paid by NIT Puducherry for sample.

5. Opening of Commercial Bids

- i) NIT Puducherry will open commercial bids of only the shortlisted bidders in the presence of the bidders or their authorized representatives who choose to attend the commercial bid opening. The date and time of opening the commercial bid will be intimated only to pre-qualified and technically acceptable bidders for the item at a later date. The representatives of shortlisted firms only will be allowed for commercial bid opening.
- ii) No sub-contracting is allowed with regard to installation, commissioning, training, warranty, maintenance and after sales service. This is the sole responsibility of the principals / their authorized agents.
- iii) The NIT Puducherry reserves the right to accept the offer in full or in parts or reject summarily or partly.

6. Delivery Period / Timelines

The deliveries and installation must be completed within 04 - 06 weeks from the date of purchase order. The time is the essence of the contract. It is mandatory for the bidders who respond to this bid to meet this expectation, as this is linked to student's admission and shifting the college to permanent campus.

7. **Locations for the supply / services**

The items covered by this document is required to be supplied and installed at National Institute of Technology Puducherry
Thiruvettakudy, Karaikal – 609 609
Union Territory of Puducherry, India

8. NIT Puducherry will not provide any accommodation / transportation for the engineers / representatives for attending installation, commissioning and demonstration work. It is the absolute responsibility of the principal supplier / agent to make their own arrangements.

9. **Purchasers right to vary quantities at the time of award**

NIT Puducherry reserves the right at the time of award of contract to increase or decrease the quantity of items specified in the schedule of requirements without any change in price or other terms and conditions.

10. **Price**

The price quoted shall be considered firm and no price escalation will be permitted. The quote should be **FOR Destination** at National Institute of Technology Puducherry, Thiruvettakudy, Karaikal – 609 609, Union Territory of Puducherry.

- i) The firm should quote the items with accessories as a whole package, otherwise the firm will not be considered for further process.
- ii) The packing, forwarding, freight, insurance and commissioning charges, if any extra may be quoted separately in commercial bid.
- iii) The actual sales tax percentage (without form "C") if any, should be specified.

11. **Performance Bank Guarantee**

The vendor will have to furnish performance bank guarantee for 10% of the total purchase order value, to be valid for one year plus two months from the date of installation and acceptance.

12. **Installation**

- i) Bidder shall be responsible for installation / demonstration as applicable and for after sales service during the warranty and thereafter.
- ii) Installation and demonstration to be arranged by the supplier free of cost and the same is to be done within 15 days of the arrival of the equipment at site.

13. **Warranty / Support**

- i) The items supplied shall carry a minimum of **ONE year of comprehensive warranty** from the date of acceptance of the equipment.
- ii) The defects, if any, during the guarantee / warranty period are to be rectified free of charge by arranging free replacement wherever necessary. This includes cost, insurance, freight, custom duty, octroi, local taxes if any and should be borne by the beneficiary or his agent. A clear confirmation should be given for this item.

14. Indemnity

The vendor shall indemnify, protect and save NIT Puducherry against all claims, losses, costs, damages, expenses, action suits and other proceeding, resulting from infringement of any law pertaining to patent, trademarks, copyrights etc., or such other statutory infringements in respect of all the items supplied by him.

15. Freight and Insurance

The items to be supplied will be insured by the vendor against all risks of loss or damage from the date of shipment till such time it is delivered at NIT Puducherry permanent campus.

16. Payment

90% payment shall be made at site against delivery, installation, commissioning and acceptance as per purchase order and balance 10% shall be made after receipt of performance bank guarantee. If no bank guarantee is given, the balance 10% will be paid after the warranty period plus two months.

17. Penalty for delayed services / LD

- i) As time is the essence of the contract, delivery period mentioned in the purchase order should be strictly adhered to. Otherwise the NIT Puducherry will forfeit EMD and also LD clause will be applied / enforced.
- ii) If the supplier fails to supply, and fix the item as per specifications mentioned in the order within the due date, the supplier is liable to pay liquidated damages of 1% of order value for delay of every week or part thereof subject to a maximum of 10% beyond the due date. Such money will be deducted from any amount due or which may become due to the supplier.
- iii) NIT Puducherry reserves the right to cancel the order in case the delay is more than 10 weeks. Penalty as at (ii) above will be deducted from the security deposit.

18. Jurisdiction

The disputes, legal matters, court matters, if any, shall be subject to Karaikal Court Jurisdiction only.

19. Force Majeure

NIT Puducherry may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that the delay, in performance or other failure to perform its obligations under the contract, is the result of a force majeure.

20. Arbitration

All disputes of any kind arising out of supply, commissioning, acceptance, warranty maintenance etc., shall be referred by either party (NIT Puducherry or the bidder) after issuance of 30 days notice in writing to the other party clearly mentioning the nature of dispute and will be referred to the arbitrator to be nominated by The Registrar (i/c), NIT Puducherry, Karaikal. The Venue for arbitration shall be Karaikal, Union Territory of Puducherry, India.

21. Interpretation of the clauses in the Tender Document / Contract Document

In case of any ambiguity / dispute in the interpretation of any of the clause in this tender document, interpretation of The Registrar (i/c), NIT Puducherry, Karaikal shall be final and binding on all parties.

22. Purchase Order may be issued to the supplier based on the lowest price of the item.

**-Sd-
Registrar (i/c)
NIT Puducherry**

“DETAILS OF THE FIRM OFFERING THIS QUOTE”
(Write or print or type in block letters)

1. Name of the firm: _____
2. Date of incorporation: _____
2. Nature of the company (tick one): Government / Public / Private Company / Partnership / Proprietorship
3. Specify the number of years in this line of activity by the Company: _____
4. Quantity of sales in the last three years for the “.....” (same model that you have quoted):

2013-2014	2014-2015	2015-2016

5. Turnover in the last three years (Lakh Indian Rupees):

2013-2014	2014-2015	2015-2016

6. Provide the postal address, telephone & fax numbers, and email address of the nearest service center.
7. Number of service engineers in the above location trained on the product quoted along with their educational qualification, certification and designation (applicable only for instruments):
8. Assured response time for service calls in hours:
9. Delivery period from the date an official purchase order placed (in weeks):
10. Enclose the list of customers to whom you have supplied “.....” during the last 3 years ending 31/12/2016 with full postal address and name of the contact person with phone, FAX numbers, and E-Mail id. Certificate regarding satisfactory performance of the “.....” from the minimum three end users should be furnished.
11. Enclose the certificate regarding the authorized dealer or distributor for the products quoted.
12. On Manufacturer’s Side to whom NIT Puducherry have to contact in case of delayed in supply and other issues committed by the authorized dealer / distributor / reseller :

Contact Person Name :

Address :

E-mail ID :

Telephone / Cell Phone :

DECLARATION

I/we have not tampered/modified the tender forms in any manner. In case, if the same is found to be tampered/modified, I/we understand that my/our tender will be summarily rejected and full Earnest Money Deposit (EMD) will be forfeited and I/we am/are liable to be banned from doing business with NIT Puducherry and /or prosecuted.

Signature of the Bidder:

Name and Designation:

Business Address:

.....

.....

Place :

Date : Seal of the Bidder's Firm

SECTION: 3

1. SPECIFICATIONS OF NON DESTRUCTIVE ULTRASONIC THICKNESS MEASUREMENT KIT

Specifications and accessories included

- Applicable materials: All homogeneous materials which allow transmission of Ultrasonic energy through it like most of metals, hard plastics, glass, ceramics, etc.
- Measuring Range: 1mm to 300mm(specified range depends on test material, transducer, surface and temperature.)
- Probe: Dual crystal type(Transmitter Receiver).
- Key pad: Sealed tactile type
- Velocity: 1000m/s to 9999m/s
- Display: LCD type. It displays Thickness, Velocity, Battery check, Coupling check and stored readings with IDs.
- Resolution: 0.01mm
- Accuracy: ± 0.1 mm (upto 60mm)
- V-path correction: Built in for better accuracy
- Calibration: One step calibration
- Battery: 2 Penlite dry cells
- Operating time: 18 to 20 hours
- Low battery: Indication by Blinking of LCD
- Auto power off: 3 minutes after switching on/last reading.

2. SPECIFICATIONS OF ULTRASONIC INTERFEROMETER FOR SOLIDS

Ultrasonic Interferometer for Solids is required to determine the velocity of ultrasonic sound in solids, Non-destructive techniques etc.

Specifications and accessories included

- Piezoelectric Oscillator,
- Power supply, quartz rod, holder, quartz rod with sample, connecting cables and R.F. meter.
- Any general purpose C.R.O

3. SPECIFICATIONS OF ULTRASONIC INTERFEROMETER FOR LIQUIDS

Ultrasonic Interferometer for Liquids is required to determine the velocity of ultrasonic sound in solids, Non-destructive techniques etc.

Specifications and accessories included

- High frequency generator Single –frequency. 2MHz
- Nichrome plated liquid cell with reflector.
- Max. displacement of the reflector : 20 mm.
- Required Quantity of liquid: 10 c.c. Least.
- Count of micrometer: /0.001 mm.
- Shielded RF cable Impedance : 50 Ω .

4. SPECIFICATIONS OF ANALOG AMMETER (0-100mA)

Purpose: for measuring current and to learn the concepts of calibration.

Specifications

- Analog moving coil Ammeter to measure 0-100 mA, with least count -2mA.
- Unbreakable, moulded, ABS plastic black case with clear transparent window.
- 4mm banana terminal
- Anti-parallax mirror scale.
- Number indications 20, 40, 60, 80 and 100 mA.

5. SPECIFICATIONS OF ANALOG VOLTMETER (0-5V)

Purpose: for measuring voltage and to learn the concepts of calibration.

Specifications

- Analog moving coil voltmeter to measure 0-5V.
- Unbreakable, moulded, ABS plastic black case with clear transparent window.
- 4mm banana terminal.
- Anti-parallax mirror scale.
- Least count: 0.2V with number indications at 1,2,3,4, and 5 V.

6. SPECIFICATIONS OF DIODE LASER LIGHT SOURCE

Purpose: To study Grating experiments, properties of LASER etc.

Specifications

- Output power range-1mW.

Wavelength -630 to 680 nm.

- Battery operated
- Compact size (90 x 90x42 mm).,
- Housed in a plastic holder case with on-off switch.

7. SPECIFICATIONS OF FIELD ALONG THE AXIS OF THE COIL SET UP (STEWART AND GEE'S APPARATUS)

Purpose: To study the field along the axis of a coil and to determine magnetic moment of a bar magnet.

Specifications and accessories included

- Current Carrying Coil Setup –Precise Tangent Galvanometer.
- Option for changing number of turns in the coil- 5, 10, 20, 50.
- Sliding Magnetometer Comprising a stout Bakelite box- 100 mm (dia) Aluminium dial graduated in degrees 0-90 four times, Anti-parallax mirror slot made by Bakelite.
- Suitable rheostat and ammeter.

8. SPECIFICATIONS OF CALORIMETER

Purpose: To study Newton's law of cooling and to determine specific heat of liquids.

Specifications and accessories included

- 1No. copper calorimeter: 75x50 mm (height x diameter) with stirrer.
- 1 wooden outer box with insulating lining + sliding wooden cover. Insulated Separation between two calorimeter holders.
- 1No- A brass nickel plated thermometer holder with copper stirrer.
- 2 No. Mercury thermometers 0-100⁰C

9. SPECIFICATIONS OF THERMOCOUPLE JUNCTIONS

Purpose: To study thermoelectric effect, calibrating a thermocouple- characteristics etc.

Specifications and accessories included

(a)

- Two junctions of Type E (Chromel–constantan) (fused, to keep at reference and hot samples) thermocouples fixed on a wooden supports.
- Suitable thermal insulations.
- 4-mm Banana type connectors(2 no) to receive the thermo-emf.

(b)

- (b) Two junctions of chromel alumel-K type (fused, to keep at reference and hot samples) thermocouples fixed on a wooden supports.
- Suitable thermal insulations.
- 4-mm Banana type connectors (2 nos) to receive the thermo-emf.

10. SPECIFICATIONS OF DIGITAL THERMOMETER (-50 TO 200°C)

Purpose: To measure the temperatures of ice-bath and hot oil for different experiments.

Specifications and accessories included

- Range of the thermometers 20 to 200 °C).
- With least count of 0.1°C in a compact and rugged metallic frame.
- 4 ½ LCD/LED display and option of operation with 9V battery.

11. SPECIFICATIONS OF DIGITAL STOP WATCH

Purpose: To measure the time during various Physics experiments.

Specifications and accessories included

- Stopwatch Functions include 10-hour maximum, 1/100 second timing, lap time, and split times.
- Measuring capacity: 9h: 59m'59.999s.
- Measuring Modes: Elapsed time, lap time, split time, 1st& 2nd place times.
- Accuracy: 99.99%
- Approx. 3 years (includes an average of 20 presses of button per day).

12. SPECIFICATIONS OF SONOMETER

Purpose: To measure frequency of tuning fork and AC supply (Mede's experiment)

Specifications and accessories included

- Wooden hollow box- made of teak wood
- Scale: Graduated wooden scales on both sides, along the length (mm-graduation) of the resonating wire.
- One each brass & steel wire respectively,
- Two moveable bridges, pulleys and fixed screw to enable a third wire to be fixed for tensioning by masses.
- Weight hanger and masses 1 to 5kg, steps of 1kg.
- Transformer and Accessories to convert it into Melde's experiment (Frequency of AC).

13. SPECIFICATIONS OF COMPASS BOX

Purpose: To detect presence of magnetic field for Physics experiments.

Specifications and accessories included

- Circular bakelite box with aluminium dial
- Size- 100 mm in diameter.
- Circular scale-90-0-90 graduation in four quadrants.
- Magnetic needle mounted on hardened steel pivot for smooth movement with anti-parallax mirror slot.

14. SPECIFICATIONS OF REGULATED POWER SUPPLY 0-12V, 5A

Purpose: Power supply for various Physics lab experiments.

Specifications and accessories included

- 0-12V section
- Output voltage : 0-12V DC continuously variable (by coarse and fine adjustment)
- Load current: 0-5 Amps
- Digital display for current and voltage.
- Overload protector beep with fuse.
- Regulation Line: +/-0.05%
- Regulation Load: +/- 0.05%
- Ripple: Less than 1mV

15. SPECIFICATIONS OF TABLE TOP WEIGHING SCALE

Purpose: To weight various objects during date to day Physics Laboratory experiments

Specifications and accessories included

- Weighing capacity: upto 5 kg.
- Least count- 1gm.
- Large LED display with auto backlite display.
- AC rechargeable battery option
- Tare/check option.
- 4 key embossed membrane keyboard.
- Selectable weighing unit. i.e. gm/kg.

SECTION: 4 COMMERCIAL BID

Tender No. & Date:

Bidder's Offer No. & Date:

S. No.	Description of item	Unit In Rs.	QTY	Rate /Qty in Rs. (excluding of all taxes)	ED in %	VAT/CST In %	Service Tax in % (in Rs.)	Total Value in Rs. (inclusive of all taxes) (9)
1	Supply of Non Destructive Ultrasonic Thickness Measurement Kit		01					
2	Supply of Ultrasonic Interferometer for Solids		02					
3	Supply of Ultrasonic Interferometer for liquids		02					
4	Supply of Analog Ammeter		05					
5	Supply of Analog Voltmeter		05					
6	Supply of Diode Laser Light Source		03					
7	Supply of Field along the axis of the coil set up: Stewart and Gee's Apparatus		04					
8	Supply of Calorimeter		04					
9	Supply of Thermocouple junctions		K-type-02 Qty E-type-02 Qty = 4 Qty					
10	Supply of Digital Thermometer (-50 to 200 ⁰ c)		05					

11	Supply of Digital Stop Watch		10					
12	Supply of Sonometer		04					
13	Supply of Compass Box		10					
14	Supply of Regulated Power Supply 0-12V, 5A		04					
15	Supply of Table top weighing Scale		01					
16	Other accessories /spares etc as given in scope of supply							
17	Installation & Commissioning (extra, if any)							
18	Packing & Forwarding charges (extra, if any)							
19	FOR Dispatching station value in Rs.							
20	Freight & Transit insurance charges, extra, if any							
21	Total all inclusive price delivered, installed and commissioned at NIT Puducherry							
22	Net cost to be paid by NIT Puducherry							

Signature & Seal of Vendor

Note: i

The price indicated for all the above items shall be exclusive of all accessories, spares etc. as given in the scope of supply.

Note: ii

The price bid should be submitted only as per the above format. No row shall be left blank. Please indicate NA, in case the item is "Not Applicable". If this format is not used or any column is left blank, then the bid will be rejected.

SECTION: 5- CONTRACT FORM

To be provided by the bidder in their business letter head

[Name of the Supplier's Firm] hereby abide to deliver theby the delivery schedule mentioned in the Section 3 of the Tender document for supply of the items if the purchase order is awarded.

The item will be supplied conforming to the specifications stated in the tender document without any defect and deviations.

Warranty will be given for the period mentioned in the tender document and service will be rendered to the satisfaction of NIT Puducherry during this period.

Signature of the Bidder :

Name and Designation :

Business Address :

Place :

Date :

Seal of the Bidder's Firm