



Tender Document

PONDICHERRY UNIVERSITY
(A Central University)
(R.V.NAGAR, KALAPET, PUDUCHERRY – 605 014)

Sub: Supply of Major and Minor Scientific Equipment under **DST-SERB** sponsored **Research Project-Reg.**

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Schedule of Requirements

Sealed tenders under **two bid** systems are invited for the purchase of the following item(s) under the **DST-SERB sponsored Research Project (EMR/2016/005795)**. The quotations duly signed and sealed should be submitted to **Dr. P. Thangadurai, Assistant Professor, Centre for Nanoscience and Technology, Pondicherry University, Puducherry-605014.**

The quotation should be sent by post (normal/speed/Registered/courier) only. The price quoted should include all the costs such as delivery, installation, testing etc. and also inclusive of all taxes. Warranty terms should be explicitly specified in your quotation. The technical specifications are given below. Last date for receiving quotation is **15.06.2018 (3.00 pm)**.

Sl. No.	Name of the Equipment with specifications	Quantity
01.	<p><u>POLISHING MACHINE (Semi Automatic)</u></p> <p><u>Specifications:</u> Platen : Single Disc with 8" (eight inch) diameter Disc should be interchangeable Rotation : 50 to 500 rpm (or wider range) Motor Power : 0.5 hp Water supply hose : Flexible, with controllable flow. Control panel : Digital display The polishing bowl should be corrosion resistant Noise level should be within the accepted limit (less than 70 dB)</p> <p>Polishing Head – 1 No. (Should be compatible with the polishing machine) Semi-automatic polishing head should be attached Should be able to hold 1.25 inch specimens. Independently powered</p> <p><u>Input Power :</u> All the items supplied should work with the input power supply of 50Hz/220 V, Single phase</p> <p><u>Spares:</u> 1) 1.5 inch specimen holder -2 Nos. 2) 2.0 inch specimen holder – 2 Nos. 3) Air drier- 1 No. 4) Magnetic substrate disc– 1No. 5) Ferromagnetic carrier sheet for sand paper/cloths - - 1 No. 6) Aluminium Disc - 1 No. 7) Control panel with PCB – 1 No.</p> <p><u>Consumables:</u> Set of Consumables for polishing/grinding for demo – 1 set.</p> <p><u>Additional consumables:</u> 1) Set of SiC papers-Manual grinding (9"x11") with grit sizes – 80, 120, 220, 400, 800, 1200) – 5 Sets</p>	01 set

	<p>2) Set of SiC papers-PSA backing-USA grade (8") with grit sizes – 60, 120, 240, 400, 800, 1200) – 20 sets</p> <p>3) Set of SiC papers-PSA backing-USA grade (8") with grit sizes – 60, 120, 240, 400, 800, 1200) – 20 sets</p> <p>4) Micro cloth with PSA for polishing – Micro USA grade – 10 Nos.</p> <p>5) Alumina suspension, 1 μ - 500 ml</p> <p>6) Diamond suspension, 0.25μ - 500 ml</p> <p>7) Alumina powder 1 μ - 500 g</p> <p>8) alumina suspension, 0.05 μ - 200 ml</p> <p>9) Diamond paste, 0.05μ - 5 g</p> <p>10) Epoxy glue for mounting the sample – 50 g (minimum)</p>	
02.	<p><u>CUTTING MACHINE (Low speed and High precision)</u></p> <p><u>Specifications:</u> To cut the hard and brittle materials of metal, ceramic samples Cutting capacity: 20-30 mm or above Cutting wheel should be a diamond blade Wheel diameter : 4 inches to 5 inches Cut Action : Gravity controlled chopping Different weight application on the cutting blade should be possible to apply pressure. Wheel should have a continuously variable speed with 80 – 400 rpm (or wider) Wheel should be cooled by a standard coolant kept with splash protection. Position resolution : 0.01 mm Horizontal specimen feed should be possible for thin sectioning. Micrometer controlled specimen feed Monitoring should be provided. Machine should automatically stop once cutting is over. Rust free body protection Blade cleaning hard material (Dressing stick)</p> <p><u>Consumables:</u> (1) Spare diamond wheels(Wafering blade) – 5 Nos. (2) Coolant oil –2litres (3) Dressing sticks – 10 Nos.</p> <p><u>Input Power :</u>All the items supplied should work with the input power supply of 50Hz/220 V, Single phase</p>	01
03.	<p><u>HIGH SPEED CENTRIFUGE (Room Temperature)(IMPORTED)</u></p> <p><u>Specifications:</u> Motor should be direct brushless induction low profile motor Maximum speed: 17000 rpm or higher Maximum RCF : 22000×g or greater Maximum volume: 4 × 100 ml Range of speed: min 300 to maximum 17000 rpm</p> <p><u>Angle rotor for 6 × 50 ml tubes - (01 No.)</u> Max. speed : 12000rpm or higher Max RCF value : 13000 × g or higher</p> <p><u>Adapter 1 × 15 ml (to be used in Angle rotor of 6 × 50 ml tubes) - (06 No.)</u></p> <p><u>Angle rotor for 1.5/2 ml tubes - (01 No.)</u> Max. speed : 18000rpm or higher Max RCF value : 20000 × g or higher</p>	01 06 01

	<p><u>The Centrifuge should:</u></p> <ul style="list-style-type: none"> - have a motor drive lid lock and should be a auto-lock lid. - Microprocessor controlled - have Digital display to show time and RPM and setting the program with microprocessor control - have Timer to monitor the running time - have Overspeed protection facility - have imbalance tolerant drive - be able to identify Imbalance and cut-off the motor immediately. - deliver a warning at the end of the run - have low noise level (below 100 dB) <p><u>Input Power :</u> All the items supplied should work with the input power supply of 50Hz/220 V, Single phase</p>	
04.	<p><u>Equipment :ELECTRONIC DIGITAL BALANCE (IMPORTED)</u></p> <p><u>Specifications:</u> Maximum weighing capacity: 200 g or greater Minimum weighing capacity: 100 g or less Resolution : 0.2 mg or better Settling time : 3s or less Readability : 0.1 mg Repeatability : 0.1 mg Weighing pan: 90 mm dia or bigger. Temperature based sensitivity drift data should be given.</p> <p>Interface: Through USB and RS 232, to be able to interface with PC/laptop computer. Interface cable should be supplied (USB or RS232)</p> <p><u>PC Computer and the interface to be supplied: 01 No.</u></p> <p><u>Computer specifications:</u> Desktop computer Processor Core i5-7200U Processor7th Generation Hard drive : 1 TB or greater + 128 GB Solid state drive RAM : 8 GB or better Screen (Monitor) size : 23.8-inch FHD IPS Display OS: Windows 10 or higher 2GB Graphics Card With CD drive</p> <p>UPS (1 kVA) for computer and Balance – 01 No.</p> <p><u>Software:</u> Compatible software to interface the Digital balance to the computer should be provided and data acquisition should be possible.</p> <p><u>Input Power :</u> All the items supplied should work with the input power supply of 50Hz/220 V, Single phase.</p>	01
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05.	<p><u>Equipment :FLATCORROSION CELL (IMPORTED)</u></p> <p><u>Specifications:</u> A Flat Corrosion Cell constructed of a Pyrex glass cylinder body with polypropylene end caps for which should be simple and easy to use for corrosion and or coatings research.</p> <ul style="list-style-type: none"> - Should be able to measure the corrosion characteristics of flat specimens of atleast 1 cm² surface. - Reference electrode (Ag/AgCl) and counter electrode (Pt mesh) should be supplied. - Volume of the cell : 250 ml (or higher) 	01

	<p>- It should withstand the pH range of 2 – 9 (or wider)</p> <p>- Temperature tolerance limit of the cell : 80°C (or higher)</p> <p>- Area of the working electrode : 1 cm²</p> <p>- Luggin Well Volume : 5 ml (or higher)</p> <p>- cell should be made up of high quality pyrex</p> <p>- Viton O-rings</p> <p>Should accommodate a wide range of electrode sizes, eliminating the need for machining.</p> <p>Spares: Spares of O-rings and abrasive/corrosive parts should be supplied.</p> <p>Additional Electrodes to be supplied:</p> <p>(1) Glassy carbon working electrode (3mm dia) – 2 Nos.</p>	
06.	<p><u>Equipment :ULTRASONICATOR WATER BATH</u></p> <p><u>Specifications:</u></p> <p>Body should be fully Stainless Steel (SS) and powder coated</p> <p>Water tank : should be made in SS</p> <p>CAPACITY : 3litre</p> <p>TANK SIZE : 240 × 140 × 150MM (SS) (minimum)</p> <p>Wire basket should be supplied</p> <p>Display: should be Digital LED</p> <p>Heater must be there to heat up the liquid inside the bath</p> <p>Timer should be provided for controlled operations</p> <p>Water spout should be there for cleaning</p> <p>Should work good for objects with any shape</p> <p><u>Input Power :</u> All the items supplied should work with the input power supply of 50Hz/220 V, Single phase</p> <p><u>Spare: One spare transducer should be supplied.</u></p>	01

TERMS AND CONDITIONS

I. General Information: -

1. Last date and time of receipt of the Tenders: **15.06.2018, 3.00 PM**
2. Date & Time of opening of the Tender: **15.06.2018, 4.00 PM**
3. Tender Document fee and EMD rates: -

S. No.	Equipment details	Tender Document fee	E.M.D. (*)
1	For each item in serial No. 1-5(per item) ^{&}	Rs.500/-	Rs.10,000/-
2	For item No. 6	Rs. 500/-	Rs. 1000/-

(*) Small scale industries are exempted from EMD;
[&]For more than one item, EMD should be multiplied accordingly (that is, 10000×Number of items).

4. **Two bid systems** have to be strictly followed. (one for Technical bid and another for commercial bid to be submitted in separate covers)
5. However, the tender document fee and EMD as specified above should be remitted by each firm / bidder, collectively for all their bids advertised under this tender.
6. Quoting merely the lowest price does not confer any right to any bidder for award of supply order. The University's Purchase Committee, reserves the right to select the equipment any bid under the grounds of specification compliance, technologically advanced quality, proven performance track record, brand reputation, service backup support, additional warranty, offer of additional / special features, Compatibility with the existing System, Training, etc.

7. The Tender Document Fee and EMD should be submitted in a separate cover superscribing **Bank Demand Draft** and **which should be enclosed with the technical bid. Tenders received without the appropriate fees will not be entertained.**
8. The Photo Copies of the Bank Instruments on payment of EMD should be attached with each bidding covers.
9. The tender/quotation must be submitted along with the stipulated tender document fee and EMD in the sealed cover, super-scribing the name of the Department / Centre for whose equipments the tender is quoted for.
10. The cover should also contain the information like, Name of the Equipment and Serial Number of Equipment for which the bids are submitted. The name and address of the bidder should also be mentioned at the From address space.
11. The tenders should be addressed to the **Dr. P. Thangadurai, Principal Investigator and Assistant Professor, Centre for Nanoscience and Technology, Pondicherry University, Puducherry – 605 014.**,
The examples for super-scribing the envelopes of the different categories of tenders are given below: -
For Major/Minor Scientific Equipment: -

<p>Tender submitted under two bid system for the <u>Centre for Nano Science & Technology</u></p> <p>Name of the Equipment: _____</p> <p style="text-align: center;">To</p> <p style="text-align: center;">Dr P. Thangadurai, Principal Investigator (SERB) & Assistant Professor, Centre for Nanoscience and Technology, Pondicherry University,</p> <p>From Puducherry – 605 014.</p> <p>Supplier's Address</p>

In case of local delivery, all tenders are to be dropped in the tender box placed at the Information Facilitation Counter, Bharat Ratna Dr. B.R. Ambedkar Administrative Block, Pondicherry University, R.V. Nagar, Kalapet, Puducherry – 605 014.

The tenders sent through fax / e-mail will not be accepted.

II. Common Conditions

1. Purchase of Tender Document:

The Tender document can be either downloaded from the University website www.pondiuni.edu.in or procured from the Information Facilitation Counter, Dr. Ambedkar Administrative Block, Pondicherry University on payment of fee as specified above, by means of a D.D, drawn in favor of **the Finance Officer, Pondicherry University, payable at Puducherry.** The downloaded application should be accompanied with the tender document fee, in the form of a Demand Draft.

2. Price Schedule

The bidder may either quote for the entire equipments or individual items required for the Centre for Nano Science & Technology. The rates should be quoted for a single unit and also for the total quantity required by the University. The price should include the Delivery, installation, training charges (if any), etc. at the respective Department, Pondicherry University.

The prices quoted shall remain firm until equipment is supplied to the respective Department, Pondicherry University.

3. Quoting the Core price & Tax, Duties, Discount etc.

The taxes / duties / discounts, if applicable, are to be explicitly and separately shown in the bid.

4. Eligibility:

The firm must have the requisite domain expertise with regard to supply, installation and post-sale service of the items they are quoting.

The firm should have been in existence for at least six years as on the date of this tender and must have executed at least three orders for this kind of equipment during the last three years.

5. Duty Exemption

The University has been granted the benefit of exemption from the payment of the Central Excise Duty and Customs Duty by the Department of Scientific and Industrial Research (DSIR), India, vide their Notification No.10/97 dt. 01-03-1997 and 51/96 dt. 23.07.96 respectively, **in respect of**

- a. Scientific and technical instruments, apparatus, equipment including computers.
- b. Accessories and spare parts of goods specified in (a) above and consumables.
- c. Computer software, compact disks, CD ROM, Recording magnetic tapes, microfilms, micro-chips etc.
- d. Prototypes.

Customs duties at Indian port, if any, will be to the account of the University.

6. Warranty:

The material covered under the purchase order, when installed, shall be warranted for the quality, workmanship, trouble free operation and performance for a period of **at least 36 months from the date of putting the system into operation** at the Pondicherry University, or at least 42 months from the date of receipt of the last lot of the consignment in India.

If any item covered under warranty fails, the same shall be replaced free of cost including all the applicable charges including shipping cost both ways.

7. The information pertaining to infra-structural, power and any other requirement for satisfactory installation and commissioning of the whole system must be provided by the bidder, at least 120 days in advance of the installation to be commenced if purchase order is issued. All drawing for electrical connections, electrical safety items piping work etc. must be provided in detail.
8. Complete technical specifications and literature, including process flow, to be included with the quotation. Manufacturers of various major parts/equipment must be mentioned explicitly.
9. A clear statement regarding availability of after-sales service and availability of spare-parts for next 5 to 10 years should be included.
10. A recent customer list (within last five years) with contact details including email address is to be submitted with technical bids / bids as the case may be.
11. If the bidder is an authorized representative in India, they are requested to inform their technical ability to take care of the problems in the system, if developed later within the warranty and outside the warranty period. The responsibility of the Indian agent must be clearly specified.
12. The bidder from abroad shall obtain, if required, export permission from the appropriate authorities in his country or the country of origin for items to be shipped to India in case of items to be imported. The University shall provide necessary information if required for this purpose.
13. All equipment must operate at 230V/50 Hz single phase and / or equivalent three phase electrical power.
14. **The validity of the each quotation should be at least for 6 months from closing date of the bid.**
15. The offers will not be considered if received after the bid closing date and time.
16. The offers received through telex / tele-fax / e-mail will not be accepted by the University under any circumstances.

17. The University shall not be responsible for any delay / loss or non-receipt of tenders by post / courier service.
18. No unsolicited correspondence shall be entertained after the submission of the offer.
19. If an order is placed with the firm, the purchase shall be governed by an agreement as per the University rules in force at the time.
20. Additional terms and conditions will be incorporated in the purchase order, if needed, to safe guard the interests of the University.
21. Tender is not transferable.
22. In case of any dispute in respect of the tender, all legal matters shall be instituted within the jurisdiction of the place where the purchaser ordinarily resides.

23. Power to reject the offer:

Pondicherry University reserves the right to accept / reject any offer in full or in part or accept any offer other than the lowest offer without assigning any reason thereof. Any offer containing incorrect and incomplete information shall be liable for rejection.

24. No Agency commission will be paid to any authorized agent in India.
25. Liquidated damages: Timely supply of the ordered items, installation, commissioning (wherever is applicable) and training etc. is the essence of the contract. In case of failure to supply within the time specified in the Purchase order, a penalty/LD of 0.5% of the total value per week or a part thereof shall be levied subject to a maximum of 7.5% in respect of items which are not supplied. The decision of Pondicherry University shall be final in this regard.
26. The training should be provided by the supplying companies on the specimen and operation of the equipment for a minimum period of two weeks from the date of installation with an expert team.
27. For any clarification with respect to technical specifications, please contact the respective Department Heads as per the details given below: -

S. No.	Name of the Department	Name of the Heads	Contact Numbers
1.	Centre for Nano Science & Technology	Dr P. Thangadurai	0413-2654974 Mob: 9489994795 thangaduraip.nst@pondiuni.edu.in

III. Specific Conditions

1. Payment of EMD:

The Tender must be accompanied by EMD as stated above, by means of a Demand Draft, drawn in favour of **the Finance Officer, Pondicherry University, payable at Puducherry** separately. *The amount is refundable. The Small Scale units are exempted from payment of EMD provided they should enclose proof of their exemption Certificate issued by the competent authority.*

2. Payments terms:

Normally a letter of Credit will be opened for 90% of CIP price, on receipt of order acknowledgement. However, 100% of the LC also be considered, if the supplier provide Bank Guarantee towards performance Security for the 10 % of the total cost of the equipment to cover the Warranty Period.

Bank charges in India shall be borne by the purchaser and outside India shall be born by the contractor / supplier.

3. The offer must be in English. The rates should be indicated both in figures and words against item specified in the given table. It is preferable that the price be quoted in Rupees or in US Dollars or in major foreign currencies.
4. **The total cost should be quoted for FOB as well as CIF – Pondicherry University.**
5. However, the price quoted under FOB or should also include the following cost if they are required during the initial stage:
 - a) Local freight / insurance for Chennai airport to University laboratory.
 - b) Installation cost if any.
 - c) Cost of consumables which are required for the equipment for initial operation upto a reasonable time.
6. In case of the Principal supplier of Foreign country unable to meet the conditions stated at para no.4, the local agent/dealer should fulfill the above said conditions in respect of Local Insurance, Freight, safety transport and installation, etc.
7. The bidder from within India shall obtain the requisite approval for Imports etc., if required.

Date: 10.05.2018

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