

**NOTICE INVITING TENDER FOR SUPPLY AND
INSTALLATION OF LABORATORY EQUIPMENT FOR
DEPARTMENT OF MATERIALS SCIENCE**

Tender No.35/2016-17

**Date of Issue: 10.02.2017
Date of closing: 31.03.2017**



Central University of Tamil Nadu
Neelakudi Campus
Thiruvarur-610 005



तमिलनाडु केन्द्रीय विश्वविद्यालय

(संसद द्वारा पारित अधिनियम 2009 के अंतर्गत स्थापित)

CENTRAL UNIVERSITY OF TAMIL NADU

(Established by an Act of Parliament, 2009)

नीलक्कुडी परिसर/Neelakudi Campus, तिरुवारूर/Thiruvarur - 610 005

☎:04366-277359 / email: purchase@cutn.ac.in

TENDER NO.35/2016-17

10.02.2017

AMENDED TENDER DOCUMENT

(Including amendments after pre-bid conference held on 20.02.2017)

NOTICE INVITING TENDER FOR SUPPLY AND INSTALLATION OF LABORATORY EQUIPMENT FOR DEPARTMENT OF MATERIALS SCIENCE

Central University of Tamil Nadu, an institution setup by an Act of Parliament, invites sealed Tender under Two-Bid System for **Supply & Installation of Laboratory Equipment for Department of Materials Science** as per the specifications given in **Annexure-III**.

The tender documents may be obtained from the Office of the Registrar, Central University of Tamil Nadu, Thiruvarur by paying a fees of **Rs.500/-** or downloaded from www.cutn.ac.in. The tenderers who are downloading the document from the website are required to enclose a Demand Draft for **Rs.500/-** drawn in favour of **Central University of Tamil Nadu** payable at Thiruvarur/Tiruvarur, towards the document fees. If exempted by the Govt. of India from payment of tender processing fee, a self-attested photocopy of the certificate issued by competent authorities for supply of equipment should be enclosed. The sale of tender documents will close on the last working day at **15:00 hours** before the last date for submission of the tenders.

The Technical Bid (**Annexure-I**) and the Commercial Bid (**Annexure-II**) shall be sealed by the bidder in separate covers duly superscribed as **Tender for Laboratory Equipment for Department of Materials Science - Technical Bid** and **Tender for Laboratory Equipment for Department of Materials Science - Commercial Bid** respectively and both these sealed covers are to be put in a bigger cover which should also be sealed and duly superscribed as **Tender for Laboratory Equipment for Department of Materials Science -Tender Notice No.35/2016-17**. The bidding may be made for a specific item or for all the items in **Annexure-III**. **The technical details of the equipment/s along with the filled-in format (Annexure-I) should be kept inside the Technical Bid Envelope and sealed.** The tender must reach **The Registrar, Central University of Tamil Nadu, Neelakudi Campus, Thiruvarur-610 005** by post/courier or by hand on or before **31/03/2017, 16:00 hours**.

Tenders received after due date/time will not be considered under any circumstances. Canvassing in any form will result in the disqualification of the bidder. Tenders sent by fax/email will not be considered. To avoid any complications with regard to Late Receipt/Non Receipt of Tenders, it may please be noted that responsibility rests with the bidder to ensure that the tenders reach the above mentioned address on or before the due date.

There will be a Pre-bid Conference on **20.02.2017** at **15:00** hours at the Room No.F1-02 Conference Hall, Administrative Building, CUTN. Pre-Bid conference shall be held to clear the doubts of intending tenderers, if any.

Who can bid?

1. The tenderer should be dealing with the supply of similar equipment at least FIVE years as on 01-01-2017.
2. The tenderer should have an annual turnover of at least **Rs. 50 Lakhs** during the last THREE financial years viz. 2013-2014, 2014-2015 and 2015-2016 (each year).
3. The tenderer should undertake to provide comprehensive onsite maintenance during the warranty and AMC for a minimum period of Five Years after warranty.
4. The tenderer should be either an original manufacturer or the authorized dealer having been established in the field for minimum period of FIVE years as on 01-01-2017.
5. The firm should have registered with CST/ and VAT (State Government).
6. 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), Govt. of India, vide their Notification No.10/97 dt. 01-03-1997 and 51/96 dt. 23-07-1996 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

Hence, the bidders should take into consideration about this facility of the University while quoting for the advertised scientific equipment.

Pre-bid Conference:

A pre-bid conference will be held as indicated in the tender document. All prospective bidders/tenderers are requested to attend the pre-bid conference. In order to facilitate CUTN for proper conduct of the pre-bid conference, all prospective bidders/tenderers are requested to submit their queries with envelope bearing the tender number and date on top and marked "**Queries for Pre-Bid Conference**" so

as to reach CUTN well before the date for Pre-bid Conference or by email to purchase@cutn.ac.in with subject “**Queries for pre-bid Conference**”. CUTN will answer the queries during the pre-bid conference, which would become a part of the proceedings of the conference. All the participating bidders/tenderers shall sign the proceedings. These proceedings will become a part of clarifications/amendments to the bidding documents and would become binding on all the prospective bidders/tenderers. These proceedings will also be published in CUTN website for the benefit of all the prospective bidders/tenderers. Before submitting the bids, all prospective bidders/tenderers are advised to go through the CUTN website after the pre-bid conference, in order to enable/make cognizance of the changes made in the bidding document.

Important Dates:

Events	Date	Time	Venue
Date of Commencement of Sale of Tender Document	10.02.2017 (Friday)	09:30 Hrs. onwards	-
Pre-bid Conference	20.02.2017 (Monday)	15.00 Hrs.	Conference Hall, Administrative Block, Room No. F1-02, (First Floor), CUTN
Last date of sale of Tender Document	30.03.2017 (Thursday)	15:00 Hrs.	-
Last date of submission of tenders	31.03.2017 (Friday)	16:00 Hrs.	-
Opening of Technical Bids	31.03.2017 (Friday)	17:00Hrs.	Conference Hall, Administrative Block, Room No. F1-02, (First Floor), CUTN

Date: **10/02/2017**

Registrar
Central University of Tamil Nadu

Instructions to Bidders including Terms and Conditions of Contract

1. Scope of Bid

1.1. Central University of Tamil Nadu (CUTN), Thiruvarur, hereinafter called “**Purchaser**”, invites bid for supply, installation and commissioning of laboratory equipment, including critical spares and warranty for three years after validation and subsequent maintenance for five years after the expiry of warranty for its Materials Science laboratory at its campus in Thiruvarur.

2. Cost of Bidding

2.1. The Bidder shall bear all costs associated with the preparation and submission of its bid and the Purchaser shall in no case be responsible or liable for those costs regardless of the conduct or outcome of the bidding.

3. Tender Document

3.1. The Tender Document is not transferable.

3.2. The bidder shall make a copy of the tender document before submitting the same to the concerned office. No requests will be entertained for making a copy after the submission of the document.

4. Clarifications in Tender Document

4.1. The Purchaser will respond to any request for clarification or modification of the Tender Document that are received up to **FIVE** (05) days prior to the deadline for submission of bids prescribed by the Purchaser. For this purpose, the prospective Bidder(s) requiring clarification in the Tender Document shall notify the Purchaser in writing at the Purchaser’s address.

4.2. Written copies of the Purchaser’s response including the explanation of the query raised by the Bidders will be sent to all the Bidders who have purchased the Tender Document. Further, it will be assumed that the Bidder has taken into account such clarifications/explanations while submitting the bid.

5. Amendment of Tender Document

5.1. At any time prior to the deadline for submission of bids, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Tender Document by way of amendment(s).

5.2. Amendments will be intimated in writing to all Bidders who have received the Tender Document and shall be binding on them. Further, it will be assumed that the Bidder has taken into account such amendments while submitting the bid.

6. Language of Bid

6.1. The bid prepared by the Bidder and all correspondence and documents related to the tender exchanged by the Bidder and the Purchaser shall be in English and the Contract shall be construed and interpreted in accordance with that language.

6.2. If any of the brochures, leaflets or communication is prepared in any language other than English, a translation of such document, correspondence or communication shall also be provided at the cost and risk of the bidder. The translation so provided shall prevail in matters of interpretation. The bidder, with respect to such documents, correspondence, and communications, shall bear the costs and risks of such translation.

7. Documents Comprising the Bid

- 7.1. All bids must be substantially responsive and shall comprise the following:
- a. Earnest Money Deposit (EMD);
 - b. Separate envelopes for technical as well as commercial bid sealed and put together in a sealed cover along with EMD.
 - c. Documents establishing conformity of the Equipment to the Tender Document;
 - d. Bidder's company related information. The bidder should furnish photocopies of the PAN and TIN.
 - e. Copy of Tender Document marked "Original" with each page signed and stamped to acknowledge acceptance of the same;
 - f. Any other information, which the Bidder wishes to provide.
 - g. Users list of same or at least closely similar equipment supplied for similar purpose.
 - h. The bidder should have an authorized service center in Chennai/Trichy/Tanjore/Kumbakonam or any other nearby city/town. Supporting documents mentioning the address of the service centers with telephone and Fax numbers should be attached with the bid.
 - i. The bidder should have consistent annual turnover of at least Rs. 50 Lakhs during the last THREE financial years viz. 2013-2014, 2014-2015 and 2015-2016 (each year) and should produce audited statement of accounts or statement of turnover certified by Chartered Accountant for the above mentioned financial years.
 - j. The bidder should have supplied similar equipment to at least three reputed central government educational/research institutions. Supporting documents such as purchase orders, work completion certificates should be attached with the bid. An undertaking to provide comprehensive onsite maintenance during the warranty and AMC periods for the equipment should be given by the bidder.
 - k. The bidder should be a reputed manufacturer or an authorized suppliers of reputed manufacturers for the equipment quoted in the tender; a certificate to this effect should be attached with the bid.

8. Format and Signing of Bid

8.1. The bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons authorized. All pages of the bid shall be numbered and except for unamendable printed literature, shall be initialed by the person or persons signing the bid.

8.2. The bid shall not contain any interlineations, erasures, or overwriting, except to correct errors made by the Bidder, in which case the person or persons signing the bid shall initial such corrections.

9. Sealing and Marking of Bids

9.1. The Bidder shall seal the bid in an envelope.

9.2. The envelope shall

(a) be addressed to **The Registrar, Central University of Tamil Nadu, Neelakudi Campus, Thiruvarur – 610 005.**

(b) bear the reference number, the title of the Tender Document (**Tender Notice No. 35/2016-17**), and

(c) bear the name and address of the Bidder so that the bid can be returned unopened in case it is declared late.

9.3. If the outer envelope is not sealed and marked as required above, the Purchaser will assume no responsibility for the bid's misplacement or premature opening.

9.4. Cable/Facsimile or Fax/conditional Bids shall be rejected.

10. Bid Prices

10.1. Prices must be quoted separately for each equipment/item identified.

10.2. Price quoted for equipment must include all costs associated with packing, transportation, insurance, all duties and levies, delivery of equipment, loading and unloading on DOOR DELIVERY basis to the university at Neelakudi Campus, Thiruvarur 610 005 including its installation, commissioning, integration and validation.

10.3. In case of equipment originating in other countries, prices shall be quoted both on FOB (port of shipment) and CIF (Port of Destination) and CIP (Carriage and Insurance Paid). The comparable prices will be arrived at based on CIP basis.

In the case equipment originating in other countries, the bidder shall provide the following at the time of supply, within 24 hours of despatch:

- a) Supplier's Invoice giving full details of the goods including quantity, value, etc.;
- b) Packing list;
- c) Certificate of country of origin;
- d) Manufacturer's guarantee and Inspection certificate;
- e) Inspection certificate issued by the Purchaser's Inspector;
- f) Insurance Certificate;
- g) Name of the Vessel/Carrier;
- h) Bill of Lading/Airway Bill;

- i) Port of Loading;
- j) Date of Shipment;
- k) Port of Discharge & expected date of arrival of goods and
- l) Any other document(s) as and if required in terms of the contract.

10.4. Price of Annual Maintenance Contract (AMC) for **FIVE** years after the warranty period shall be quoted separately for each equipment in the format provided in Annexure-II. Purchaser reserves the right to negotiate on AMC.

10.5. Prices quoted by the Bidder shall be firm during the validity of the bid.

11. Bid Currency

11.1. Prices of indigenous equipment/items shall be quoted in Indian Rupees.

11.2. Prices of equipment/items originating in other countries shall be quoted in the currency of country of origin and the portion of allied work and services, which are to be undertaken in India, are to be quoted in the Indian Currency. The comparison of financial bids would be done after converting the currency value in INR based on RBI rates applicable on the date of opening of the tender.

12. Conformity of the Tender Document

12.1. The Bidder shall furnish, as part of its bid, documents establishing the conformity of the Equipment that the Bidder proposes to supply under the Contract to the requirements of the Purchaser, as given in the Tender Document.

12.2. The documentary evidence of conformity of the Equipment to the Tender Document may be in the form of written descriptions supported by literature/diagrams/certifications, including:

- (a) A detailed description of the essential technical, functional and performance characteristics of the Equipment that the Bidder is proposing to supply;
- (b) Technical details of the major subsystems/components of the Equipment;

13. Earnest Money Deposit (EMD)

13.1. The Bidder shall furnish, as part of its bid, an **EMD @ 2.5%** on estimated value and that shall be interest free. The amount of EMD is mentioned at **Annexure-V**.

13.2 The firms who are registered with National Small Industries Corporation (NSIC) / or Small Scale Industrial (SSI) are exempted to furnishing the EMD and tender fee. Self-attested photocopy of valid registration certificate issued by competent authority for supply of laboratory equipment must be enclosed with the technical bid.

13.3. The EMD shall be in the form of a demand draft drawn in favour of **Central University of Tamil Nadu** and payable at **Thiruvarur**. The EMD may also be in the form of Bank Guarantee (**Annexure-VI**).

13.4. Any bid not accompanied with the EMD shall be rejected by the Purchaser as non-responsive.

13.5. The successful bidder's bid security will be returned as promptly as possible, but not earlier than fifteen (15) days after the successful Bidder has furnished the required performance security.

13.6. The EMD may be forfeited under the following circumstances:

(a) If a Bidder:

(i) Withdraws its bid during the period of bid validity specified on the Bid Form or

(b) In the case of the successful Bidder, if the Bidder fails to:

(i) Sign the Contract or

(ii) Furnish performance security.

14. Period of Validity of Bids: Bids shall remain valid for a period of 180 days after the date of deadline for submission of bids prescribed by the Purchaser.

15. Deadline for Submission of Bids

15.1. Bids must be received by the Purchaser at the address specified not later than the time and date as stated. In case this date happens to be a declared holiday for the office of the Purchaser or happens to be a holiday declared incidentally, the Bids shall be received up to the appointed time on the next working day.

15.2. The Purchaser may, at its discretion, extend this deadline for submission of bids in which case all rights of the Purchaser and all obligations of the Bidders will thereafter be subject to the deadline as extended.

16. Late Bids: Any bid received by the Purchaser after the bid submission deadline prescribed by the Purchaser, shall be rejected and returned unopened to the Bidder.

17. Modification and Withdrawal of Bids

17.1. The Bidder may modify or withdraw the bid after submission, provided a written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for bid submission.

17.2. The Bidder's modifications shall be prepared, sealed, marked and dispatched as follows:

(a) The Bidders shall provide the modification to its bid, clearly identified as such, in an envelope duly marked **BID MODIFICATION**.

17.3. A Bidder wishing to withdraw the bid shall notify the Purchaser in writing prior to the deadline prescribed for bid submission. The withdrawal notice shall:

(a) be addressed to the Purchaser at the specified address and

(b) bear the reference number and the title of the project, and the words **BID WITHDRAWAL NOTICE**. Bid withdrawal notices received after the bid submission deadline will be ignored and the bid submitted prior to that will be deemed to be a valid bid.

17.4. No Bid may be modified subsequent to the deadline for submission of Bids.

17.5. No bid may be withdrawn in the interval between the bid submission deadline and the expiration of the bid validity period. Withdrawal of a bid during this interval may result in the forfeiture of the Bidder's EMD.

18. Opening and Examination of Bids

18.1. The Technical bids will be opened on the prescribed date and time as mentioned in the Bid document. Bidders or their representative may be present during the opening of technical bid, if they wish to be present.

18.2. The purchaser will evaluate the technical bids. Those bids, whose technical bids fulfill the technical requirements and responsive to the tender requirements will be considered. Those bids which found to be either non-responsive, not satisfying the technical requirements or both will not be considered and will be rejected.

18.3. The Price bids of the successful bidders on the basis of evaluation as mentioned in 18.2 will be considered for the next stage for opening.

18.4. The Purchaser will examine the bids to determine whether they are complete, whether any computational errors have been made, whether required security has been furnished, whether the documents have been properly signed and whether the bids are generally in order.

18.5. Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price, which is obtained by multiplying the unit price and quantity, or between subtotals and the total price, *the unit or subtotal price shall prevail* and the total price shall be corrected. If there is a discrepancy between words and figures, *the amount in words shall prevail*. If a Bidder does not accept the correction of errors, the bid will be rejected and its EMD may be forfeited.

18.6. The Purchaser may waive any minor nonconformity or irregularity in a bid that does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

18.7. Prior to the detailed evaluation, the Purchaser will determine whether each bid is complete and is substantially responsive to the Tender Document. For purposes of this determination, a substantially responsive bid is one that conforms to all the terms, conditions and specifications of the Tender Document without material deviations, exceptions, objections, conditionality or reservations. A material deviation, exception, objection, conditionality, or reservation is:

(a) One that limits in any substantial way the scope, quality, or performance of the Equipment;

OR

(b) One that limits, in any substantial way that is inconsistent with the Tender Document, the Purchaser's rights or the successful Bidder's obligations under the Contract; and

(c) One that the acceptance of which would unfairly affect the competitive position of other Bidders who have submitted substantially responsive bids.

18.8. If a bid is not substantially responsive, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the nonconformity. The Purchaser's determination of bid responsiveness will be based on the contents of the bid itself and any written clarifications submitted by the Bidder.

19. Clarification of Bids: During the bid evaluation, the Purchaser may, at its discretion, ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing, and no change in the price or substance of the bid shall be sought, offered or permitted.

20. Evaluation of Responsive Bids: The Purchaser will evaluate the bids that have been determined to be substantially responsive.

21. Contacting the Purchaser

21.1. From the time of bid opening to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bid, it shall do so in writing.

21.2. If a Bidder tries to directly influence the Purchaser or otherwise interfere in the bid evaluation process and the Contract award decision, his bid shall be rejected.

22. Award Criteria

22.1 Purchaser will award the Contract to the Bidder whose bid has been determined to be substantially responsive and the Lowest Quote Evaluated Bid.

22.2 The University reserves the right to buy different items/quantity from different bidders considering price of individual/group of equipment or any other factors as decided by the committee.

23. Purchaser's Right to Accept/Reject/Modify Bids

23.1. The Purchaser reserves the right to accept or reject any bid or to annul the bidding process and reject all bids at any time prior to Contract award, without thereby incurring any liability to the Bidders.

23.2. The Purchaser reserves the right to negotiate with the Bidder having the Lowest Evaluated Bid.

24. Award of Purchase Order

24.1. Prior to the expiration of the period of bid validity, the Purchaser will issue the Letter of Intent / Purchase Order to the successful Bidder in writing.

24.2. The Purchase Order will constitute the foundation of the Contract.

24.3. Upon the successful Bidder's furnishing of the copy of the Purchase Order duly signed on each page and the Performance Security, for the equipments ordered in foreign currency, the Purchaser will open a letter of credit (LC) in a

convenient Nationalized Bank in India. For opening of LC necessary arrangements shall be provided by the supplier or its authorized agents.

25. Contract Agreement

25.1. Within fifteen (15) days of receipt of the Purchase Order, the successful Bidder shall sign and date its copy on each page and return it to the Purchaser, along with the Performance Security.

25.2. Copy of Purchase Order duly signed and dated by the successful Bidder on each page shall constitute the Contract Agreement.

26. Performance Security

26.1. Within fifteen (15) days of receipt of notification of award from the Purchaser, the successful Bidder shall furnish the performance security equal to 10% of the Contract value (excluding the value of annual maintenance charges). **The Performance Security will be valid all along the warranty period and shall extend upto sixty (60) days after the date of completion of warranty period.**

26.2. The security shall be in one of the following forms:

(a) A bank guarantee (in the format as provided in **Annexure-VII** of the bidding documents) issued by the Indian Scheduled bank acceptable to the Purchaser.

(b) A Demand Draft favouring, **Central University of Tamil Nadu** payable at **Thiruvarur**.

26.3. The security shall automatically become null and void once all the obligations of the Supplier under the Contract have been fulfilled, including, but not limited to, any obligations during the Warranty Period and any extensions to the period. The security shall be returned to the Supplier not later than fifteen (15) days after its expiration.

26.4. Failure of the successful Bidder to comply with the requirements shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD, in which event the Purchaser may make the award to the next lowest evaluated bid submitted by a qualified Bidder or call for new bids.

27. Contract Documents

27.1. All documents forming part of the Contract (and all parts of these documents) are intended to be correlative, complementary and mutually explanatory. The Contract shall be read as a whole.

27.2. The order of precedence of the Contract documents will be as follows:

- (i) Contract Agreement
- (ii) All other Forms
- (iii) Equipment and their Requirements
- (iv) Supplier's Bid
- (v) Tender Document

28. Amendment to Contract: No amendment or other variation of the Contract shall be effective unless it is in writing, is dated, expressly refers to the Contract and is signed by a duly authorized representative of each party to the Contract.

29. Supplier's Responsibilities

29.1. The Supplier's obligations involve:

- (a) Supply of Equipment/items given in Tender Document.
- (b) Making operational the Equipment (installation, commissioning & validation of Equipment).
- (c) Development of test methods & applications.
- (d) Training, at the cost of Supplier, of personnel in operation, day-to-day maintenance and troubleshooting of the Equipment.
- (e) Supply of Material (instruction/operation/service/maintenance manuals including drawings & circuit diagrams and application notes), Calibration Certificates (where applicable, traceable to national/international standards) and any other documents specified in the Contract.
- (f) Maintenance of the equipment during and after the warranty period (Five Years of AMC after the warranty of three years).

29.2. The Supplier shall, unless specifically excluded in the Contract, perform all such work and/or supply all such items, services and materials not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for installation & commissioning, integration & validation of Equipment as if such work and/or items and Materials were expressly mentioned in the Contract.

29.3. The Supplier shall comply with all laws in force in India. The laws will include all national, provincial, municipal or other laws that affect the performance of the Contract and are binding upon the Supplier. The Supplier shall indemnify and hold harmless, the Purchaser from and against any and all liabilities, damages, claims, fines, penalties and expenses of whatever nature arising or resulting from the violation of such laws by the Supplier.

30. Time for Supply, Installation, Commissioning and Validation of the Equipment

30.1. The Supplier shall supply the Equipment within the period specified in the tender document i.e. **within FOUR weeks of signing the purchase order or within the period mutually agreed between purchaser and supplier.**

30.2. The Supplier shall thereafter proceed with the installation & commissioning, integration and validation and demonstrate operational acceptance of the Equipment within the period specified, unless it is mutually agreed.

31. Terms of Payment

31.1. For **indigenous equipment**, 90% payment will be released after satisfactory delivery, installation of the equipment and remaining 10% will be released on

submission of a Bank Guarantee for equivalent value (10%) as performance security to cover the warranty period (36 months).

31.2. For **imported equipment**, normally a letter of Credit will be opened for 100% CIP price on receipt of order of acknowledgement. However, 90% of the LC amount **only** will be paid on proof of the shipment of the consignment with necessary documents to be detailed at the time of placing of the purchase order. Balance of 10% of the LC amount shall be released after receipt of a performance bond of 10% of the total contract/purchase value in the form of bank guarantee covering the warranty period, obtained from a bank which has its office in India.

31.3. For equipment ordered in foreign currency, opening of LC, Payment of Customs Duty and clearance of goods shall be done/assisted by the supplier or its authorized Indian agent. The custom duty as applicable after considering eligible concessions based on DSIR exemption etc will only be paid by the purchaser. The University can provide the copy of the DSIR customs and excise duty exemption certificate upon request.

31.4. Payment for annual maintenance contract after the warranty period shall be released at the end of six month/1 year after the expiry of warranty period, subject to Government of India norms.

31.5. If any time before the delivery of the equipment, it is found that the same equipment have been offered to another party in India at a lower rate, payment shall be restricted to the extent of such lower rate and the Supplier shall be liable to pay the Purchaser the difference in two rates i.e. excess charged over such lower rate, if payment had been made by the purchaser. The University will look into a reasonable past period to ensure this.

32. Taxes and Duties: The Supplier should ensure payment of all taxes, duties, levies and charges assessed by all municipal, state or national government authorities, in connection with the Goods and Services supplied under the Contract.

33. Product Upgrades: The Supplier shall continue to support and maintain the version/model of the Equipment supplied by upgrading the software and the hardware as and when amendments are carried out in the existing version or the product is upgraded. Whereas upgrades to the software shall be supplied free of cost, the Supplier may charge for upgrade in hardware provided it is of major nature. An upgraded higher version of the instrument and software related with the instrument shall be supplied.

34. Penalties

34.1. If the Supplier fails to complete any of the activities in accordance with the time specified for it, or any extension of the time granted by the Purchaser, the Supplier shall pay to the Purchaser penalties at the rate specified in the Tender document.

34.2. The Purchaser reserves the right to terminate the contract if the Supplier defaults on any of the time limits by more than **FOUR** weeks.

35. Defect Liability

35.1. The Supplier warrants that the Equipment, including all subassemblies and components provided, shall be free from defects in the design, engineering/manufacturing, workmanship and performance that prevent the Equipment and/or any of its subassemblies and components from fulfilling the Equipment Requirements or that limit in a material fashion the operation, reliability, accuracy, sensitivity and precision of the Equipment, its subassemblies and components. Commercial warranty provisions of products supplied under the Contract shall apply to the extent that they do not conflict with the provisions of this Contract.

35.2. The Warranty Period shall commence from the date of validation of the Equipment and shall extend for the length of time specified in the tender document supra.

35.3. If during the Warranty Period any defect found in the Equipment, the Supplier shall promptly, at its sole cost, repair or otherwise make good such defect as well as any damage to the Equipment caused by such defect. Any defective Equipment, Subassembly or component that has been replaced by the Supplier shall become the property of the Supplier and the new substituted/replaced equipment in good condition shall become the property of the purchaser.

35.4. Validation of the Equipment shall be carried out by the Supplier each time a major repair is carried out in the Equipment during the warranty period.

35.5. Response time for attending to defects shall be 24 - 48 hours after they are reported to the Supplier or its designated service agent. If the Equipment cannot be used for more than TWO working days by reason of such defect and/or making good of such defect, the warranty period for the Equipment shall be extended by a period equal to the period during which the Equipment could not be used by the Purchaser because of such defect and/or making good of such defect.

36. Intellectual Property Rights Warranty and Indemnity

36.1. The Supplier hereby represents and warrants that the Equipment as supplied, installed & commissioned along with its Application Software and copying of Manuals & other documents provided to the Purchaser in accordance with the Contract does not and will not infringe any Intellectual Property Rights held by any third party.

36.2. The Supplier shall indemnify and hold harmless the Purchaser from and against any and all losses, liabilities and costs (including losses, liabilities and costs incurred in defending a claim alleging such a liability), that the Purchaser may suffer as a result of any infringement or alleged infringement of any Intellectual Property Rights.

37. Effect of Force Majeure

37.1. If the Supplier is prevented, hindered, or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the Purchaser in writing of the occurrence of such event and the circumstances of the event of Force Majeure within fifteen (15) days after the occurrence of such event.

37.2. The Supplier, when affected by the event of Force Majeure shall use reasonable efforts to mitigate the effect of the event of Force Majeure upon its performance of the Contract and to fulfill its obligations under the Contract, but without prejudice to Purchaser's right to terminate the Contract.

37.3. No delay or non-performance by the Supplier caused by the occurrence of any event of Force Majeure shall:

- (a) Constitute a default or breach of the Contract;
- (b) Give rise to any claim for damages or additional cost or expense occasioned by the delay or non-performance.

37.4. If the performance of the Contract is substantially prevented, hindered, or delayed for a single period of more than THIRTY days or an aggregate period of more than sixty (60) days on account of one or more events of Force Majeure, the Purchaser shall have the right to terminate the Contract by giving a notice to the Supplier.

38. Extension of Time Limits for supply & making operational the Equipment

The time limit for supply, installation & commissioning, integration & validation shall be extended if the Supplier is delayed or impeded in the performance of any of its obligations under the Contract by reason of any of the following:

- (a) Any occurrence of Force Majeure;
- (b) Any other matter specifically mentioned in the Contract;

By such period as shall be fair and reasonable in all the circumstances and as shall fairly reflect the delay or impediment sustained by the Supplier.

39. Assignment: The Supplier shall not, without the prior written consent of the Purchaser, assign to any third party, the Contract or any part thereof.

40. Governing Law: The Contract shall be governed by and interpreted in accordance with the laws of India.

41. Settlement of Disputes : Any dispute or claim arising out of/relating to this Contract or the breach, termination or the invalidity thereof, shall be settled by the Hon'ble Courts of Justice at Thiruvarur.

42. The page number should be marked in all pages serially (including all supporting documents enclosed with the tender document) and the declaration for the same shall be submitted by the bidder as **Annexure-VIII**.

43. Central University of Tamil Nadu reserves the right to accept or reject any or all the tenders in part or whole or may cancel the tender at its sole discretion without assigning any reason whatsoever. No further correspondence in this regard will be entertained.

SUMMARY SHEET:

Purchaser	Central University of Tamil Nadu
Purchaser's address	Central University of Tamil Nadu, Neelakudi Campus, Thiruvavur - 610 005.
Tender Document Fees	Rs.500/-
EMD	EMD @ 2.5% on estimated value and that shall be interest free. The amount of EMD is mentioned at Annexure – V .
Period of Bid Validity	The Bids shall be valid for a period of One Hundred and Eighty (180) days from the date of deadline for the submission of bids.
Pre-bid Conference	<u>Time:15:00</u> hours; <u>Date: 20.02.2017</u>
Deadline for the submission	<u>Time:16:00</u> hours; <u>Date: 31.03.2017</u>
Time, Date and Venue for opening of Technical Bids	<u>Time:17:00</u> hours; <u>Date: 31.03.2017</u> <u>Venue:</u> Administrative Building, Room No.F1-02
Performance Security	The Supplier shall provide a performance security equal to 10% of the Contract value (excluding the value of annual maintenance charges).
Deadline for the supply of the equipment	Four (04) weeks from date of signing of copy of Purchase Order by the Bidder.
Deadline for the Installation and Commissioning of equipment	Two (02) weeks from the deadline for supply of equipment.
Rate for Penalties	The Supplier shall pay the Purchaser Penalties at the rate of 1.0% per week of the Contract value (excluding the value of annual maintenance charges).
Warranty Period	The period of warranty shall be Thirty Six (36) months after validation.

Technical Bid
(To be enclosed in a separate sealed cover)

Company Profile	
Name	
Address of the registered office	
Name & Designation of CEO	
Contact numbers of CEO	
Nature of Business	
Years of operations in India	
Location of offices in India	
Alliances for the purpose of this Bid	
Details of alliance(s)	
Type of alliance(s)	
Experience/Credentials	
Number of similar units installed in India	
Number of similar units installed in Chennai/Trichy/Tanjore/Kumbakonam or any other nearby city/town	
* List of satisfied customers in India	
Service Support in India	
Track record of service provided to clients with supporting documents	
Location of service centers	
Number of trained service engineers	
Number of trained service engineers exclusively dedicated to each equipment offered	
Number of trained service engineers for the equipments offered stationed in Chennai/Trichy/Tanjore/Kumbakonam or any other nearby city/town	
Number of application specialists	
Whether the OEM makes available any service support in India	
Availability of spares in India	
Whether the service set up maintains stock of essential spares in India	
Lead time for supply of essential spares	

*** Testimonials from three satisfied customers may be attached
Compliance Statement to specifications of the equipment to be provided by the tenderer as in
Annexure-IV**

**All equipment must operate at 230V/50 Hz single phase and/or equivalent three phase
electrical power.**

Signature _____

Name _____

Designation _____

Date: _____

Place: _____

Seal of Company _____

Other Details:

Name and Address of the bidder

Note: All the following details shall relate to the vendor for the items quoted for

1.Name of the Bidder

- a. Full postal address
- b. Full address of the premises
- c. Telegraphic address
- d. Telex number
- e. Telephone number
- f. Fax number
- g. Type of firm: Propriety/ Private/ Private Ltd/ MNC/ Cooperative /Govt. undertaking
- h. Name of the proprietor /Partners
- i. Year of starting of manufacturing
- j. PAN Number
- k. TIN Number

2.Application fee of Rs. _____ DD No. _____ Dated _____

3.EMD of Rs. _____ DD No. _____ Dated _____

4.Total Annual Turn-over (value in Rupees) (2013-2014, 2014-2015 & 2015-2016) -
(Certified proof from competent authority to be attached)

5.Has the firm ever been debarred/blacklisted by any Govt. Organization/Dept.?
If 'yes' the details thereof.
The terms and condition or acceptable to me/us.

Signature and seal of the bidder

Commercial Bid**(To be enclosed in separate sealed cover)**

1. The price of the Lab Equipment in the Annexure-III is to be given individually in the format mentioned below:

Sl. No.	Name of the Equipment	No. of Units/ Sets	Cost per Unit/Set	Total Cost (Inclusive of all taxes & delivery /installation charges)
1.	Rotary Evaporator	1		
2.	pH Meter	1		
3.	Hot Air oven	1		
4.	Ultrasonic Sonicator	1		
5.	Centrifuge	1		
6.	Desiccator	1		
7.	Spin coater	1		
8.	Hot Plate with Magnetic Stirrer	5		
9.	Electrochemical Work Station	1		
10.	High temperature muffle furnace with a microprocessor based PID temperature controller	1		
11.	UV-Visible NIR Spectrophotometer	1		
Grand Total (Inclusive of all taxes)		(In Words)	(In Figures)	

2. The quote should include a warranty of **THREE** years from the date of commissioning/installation of the equipment and AMC for **FIVE** years. The format for AMC is provided below:

Sl. No.	Annual Maintenance Contract (AMC) after the Warranty Period					
	Name of the Equipment	4 th Year	5 th Year	6 th Year	7 th Year	8 th Year

3. Maximum educational discount as could be offered should be mentioned.

4. Price quoted for equipment must include all costs associated with packing, transportation, transit insurance, all duties and levies, delivery of equipment, loading and unloading on **DOOR DELIVERY** basis to the university at Thiruvarur including its installation, commissioning, integration and validation.

Signature and seal of the bidder

5. BID PROFORMA

Sl. No	Name & Description of Item	Unit Rate	VAT%/CST	Freight Charges upto University	Installation Charges	Customs Clearance Charges	Concessional Customs Duty	Excise Duty	TOTAL Price FOR at Central University of Tamil Nadu, Thiruvavur
1	Rotary Evaporator	1							
2	pH Meter	1							
3	Hot Air oven	1							
4	Ultrasonic Sonicator	1							
5	Centrifuge	1							
6	Desiccator	1							
7	Spin coater	1							
8	Hot Plate with Magnetic Stirrer	5							
9	Electrochemical Work Station	1							
10	High temperature muffle furnace with a microprocessor based PID temperature controller	1							
11	UV-Visible NIR Spectrophotometer	1							

Note: This proforma will be the part of commercial Bid Proforma.

Signature and seal of the bidder

Technical Specifications

1. Rotary Evaporator with Chiller and Vacuum Pump – 1 No.

Volume of Heating Bath: min 4 to 5 Litre (Approx.)

Bath Heater capacity: 1000 -1200watts

Heating Bath controller: PID with display for set and actual temp.

Bath Temperature range: Ambient +5 to 180°C

Temperature accuracy: +/- 2 °C

Heating bath material: Stainless steel

Min/Max flask size: 50ml/ 3000 ml

Cond. Cooling area: 1000-1200 cm³

Power supply: 220-230 V AC, 50HZ

Rotation speed: 30 to 270 rpm

Rotation speed display: yes

Lift: Motorized

Manual lift (when power fails): yes

Height adjustment: 170mm (approx.)

Flask Ejector: yes

Condensor support: yes

Foot print: 200-220 cm²

Threaded Connectors for utilities: Yes

Feed stopcock and tube make of: PTFE

Environmental conditions (temp): 10 -40 °C

Glass sets: D and V

Vacuum pump –PTFE coated diaphragm with solvent trap

Chilled water circulator with 4-5 L capacity

- Fabricated with SS Top and SS angle structure.
- Panels in oven baked with epoxy coated mild steel
- Build in coolant reservoir with 4-5 litres capacity
- CFC free compressor
- Build-in pump with capacity of 15L/min
- Temperature range up to 0°C
- Build-in digital temperature controller

2. pH meter Bench-top – 1 No.

- Measuring range: 0.00~14.00pH
- Accuracy: ± 0.05 pH
- Resolution: 0.01pH
- Environment Temperature: 0°C~50°C
- Humidity: $\leq 95\%$
- Display: 4-digital LCD
- Power Supply: Input AC 220V, Output DC 6V

3. Hot air oven (with digital temperature controller) – 1 No.

- Temperature Range: 25°C - 300°C.
- Size : 45 x 45 x 45 cms
- Watts : 1750- 2000
- Trays : 2 or 3
- With Double Walled Chamber, Inner made of Stainless Steel and Outer made of cold rolled mild steel sheets duly finished in powder coating. Inter space in between the walls should be tightly packed with special grade glass wool.
- Inner chamber accommodates trays at adjustable heights.
- Insulated double walled door in the front is provided with locking arrangements.
- Heating is by Nichrome wire heaters evenly distributed on the three sides.
- Temperature should be indicated and controlled by Digital Temperature controller.
- Fan should be provided in the instrument to give uniform heating inside the chamber.
- Built in control panel accommodating all electrical/electronic accessories should be provided at the side of the chamber.

4. Ultrasonic Sonicator (Digital) – 1 No.

- Capacity : 6 to 8 litres
- Frequency : 40 kHz to 50 kHz
- Timer : 90 min – 100 min
- Inner tank and outer body made of stainless steel.
- Uniform cavitations throughout the tank with special transducers.
- Separate oscillator is needed which eliminates damage to generator in case of failure of transducers.
- Continuous self tuning circuitry is essentially needed for any change in workload, liquid level and bath temp.
- Plastic body with chemical resistant
- Sweep frequency should eliminate standing waves and create consistent cavitation throughout tank
- 90–100 minute digital timer and continuous ultrasonic operation
- Can be heated up to 65°C to 75°C and set for either Fahrenheit or Celsius
- High-temp safety alarm indicator

5. Centrifuge Machine – 1 No.

Max. Speed: 16000-20000 rpm

Max. RCF: 18600xg

Materials: Stainless steel

Max. Capacity: 12 x 1.5 ml

Voltage: AC 220 V 50Hz

Microprocessor controlling system

Stainless steel chamber

Motor: Frequency conversion motor

LCD digital display

Pre-set and running speed display required

Heads with capable of holding 2ml, 5ml, and 10ml sample holders

Timer range: 0-100 min

Noise: < 50 to 60dB

Lid with safe locking is required. Lid should open automatically when operation finished.

6. Desiccator with Vacuum Air Pump – 1 No.



Vacuum gauge: One piece; For 0 to -0.1 MPa

Valves: 2 pieces; Nozzle diameter 9mm

Packing: Made of Silicon

Rack Shelves: 4 racks as accessories

Outside dimensions (mm): (approx.) : 445W x 340D x 590H

Usable inside dimensions (mm): 220W x 240D x 460H

Rotary vacuum Pump:

- Power Supply : 220 Volt 50 Hz
Pumping Rate: min 5.5 to 6 CFM
Power: 1/2 HP
- Heavy duty
- Two stage rotary
- Max Vacuum: 15 Micron 29.5+ inch mercury vacuum.
- Power cord and switch on the pump
- Aluminium alloy casing.

7. Spin Coater (Programmable) – 1 No.

- Type: Precision controlling through micro controller
- Speed range: 100 RPM to 10000 RPM. (Programmable)
- Accuracy: < $\pm 1\%$ error across the full range
- Working Chamber: PTFE coated
- Power Supply: ± 230 V/AC, 50 Hz

- Vacuum Suction: Integrated Vacuum release switch
- No. of Protocols: 2 (10 Steps/Protocol)
- Protocol Setting: Keypad
- Protocol Saving option: Yes
- Display: Protocol Status on LCD Console
- Acceleration: upto 2000rpm/sec (Programmable)
- Wattage: 150-200 W
- 8" Teflon Coated Working Chamber
- Transparent Photo-Resist Lid over Working Chamber
- Inert gas Purging Facility
- Compatible Oil-Free Vacuum Pump
- Dial Gauge Indication of Vacuum Chuck
- Glass, Metal & PTFE Substrates
- Noise : <60 dB

8. Hot plate with Magnetic Stirrer – 5 Nos.

- Ceramic coated hot plate
- PID temperature control
- Hot warning light, remains active even when unplugged
- Plate Dimensions: min 130 x 130 mm to 150 x 150 mm.
- Stirrer Speed: 30 to 1500 rpm
- Max. Plate Temperature: +340°C
- Heater Power: 530W
- Stirring Capacity: 20 litres
- Electrical supply : 220-240v
- Socket to fit temperature controller
- Speed accuracy: +/- 1%
- Digital display
- Hotplate Temperature up to 340°C
- Temp setting accuracy +/- 1C
- Speed accuracy: +/- 1%

9. Electrochemical Work station – 1 No.

Electrochemical Workstation with Potentiostat/Galvanostat with Corrosion, Impedance, corrosion, Electrochemistry s/w, Battery charge and discharge, deposition, photovoltaic studies with latest Windows Based Acquisition s/w should also include power supply 220V/50Hz, Interface Cable for USB Port, 4 glass cells with one cell top, Cell Cable & Installation.

General Techniques Required in the system

- Cyclic Voltammetry (CV) with simulation/fitting programs
- Linear Sweep Voltammetry (LSV) with stripping LSV includes: I-V measurements, I_{max} , P_{max} , Fill factor Power Max, etc. Voltage range: +/- 10V.
- Bulk Electrolysis with Coulometry (BE)
- Differential Pulse Voltammetry (DPV) with stripping
- Normal Pulse Voltammetry (NPV) with stripping
- Square Wave-Osteryoung Voltammetry (SWV) with stripping
- Tafel Plot (TAFEL), potentiodynamic deactivation, pitting corrosion, corrosion rate, linear Polarisation, Corrosion current etc.
- Multi-Potential Steps (STEP)
- Multi-Current Steps (ISTEP)
- Amperometric i-t Curve (i-t) – Lifetime testing
- Polarisation I-V curves Linear Sweep
- Open Circuit Potential – Time (OCPT)
- AC Impedance (IMP) [Minimum range required: 1 micro Hz to 1 MHz]
- Impedance – Time (IMPT) (Mott-Scottsky)
- Impedance – Potential (IMPE)
- Impedance Simulator with fitting
- Open Circuit Potential – Time (OCPT)
- Bode : $\log Z$ vs \log (freq)
- Bode : Phase vs \log (freq)
- Bode : $\log Z''$ & Z' vs \log (freq)
- Bode : $\log Y$ vs \log (freq)
- Nyquist ; Z'' vs Z'
- Admittance; Y'' vs Y'
- Warburg: Z'' & Z' vs $w^{1/2}$ w-angular frequency
- Z' vs $w Z''$
- Z' vs Z''/w
- \cot (phase) vs $w^{1/2}$
- Galvanostatic Charge discharge single/multiple cycle -Chrono Potentiometry (CP) with potential limits, polarity by potential or time, no.of cycles etc
- Voltage vs current density curves
- Single or Multi potential steps with charge limits, single or multi current steps, mixed voltage/current control using macro
- I-V measurements, I_{max} , P_{max} , Fill factor etc. Voltage range: +/- 10V and minimum current limit: +/- 10pA to 1A .
- Compliance voltage range: +/- 20V or better with the current range from +/- 400 mA to 1A.

- EIS (electrochemical impedance spectroscopy) is required with frequency range from 1 micro Hz to 1 MHz.
- Smallest current range +/- 10 nA to current range from 500 mA to 1A in eight ranges with pA resolution.

Other General Useful Techniques Required along with the system

- Chrono Amperometry (CA)
- Chrono Coulometry (CC)
- AC Voltammetry (ACV) with stripping
- Differential Normal pulse Voltammetry (DPNV) with stripping
- Second Harmonic AC Voltammetry (SHACV) with stripping
- Differential Pulse Amperometry (DPA)
- Double Differential Pulse Amperometry (DDPA)
- Triple Pulse Amperometry (TPA)
- Integrated Pulse Amperometry Detection (IAPD)
- Hydrodynamic Modulation Voltammetry (HVM)
- Sweep-Step Functions (SSF)
- Chronopotentiometry with Current Ramp (CPCR)
- Potentiometric Stripping Analysis (PSA)
- Staircase Voltammetry (SCV) with stripping
- Auxiliary Signal Measurement Channel
- RDE control (0-10V output)
- IR Compensation
- External Potential Input

Electrochemical Cell System should include 4 glass cells with one Cell top

- Pt Working Electrode
- GC Working Electrode
- Ag/AgCl Reference (aq)
- Ag/AgCl Reference (non aq)
- Calomel Reference Electrode
- Pt Wire Counter Electrode
- Electrode Polishing Kit
- Cell Stand

Licensed & Full version of softwares required with following features:

32-bit Windows-based software, Multi-document interface, Open, save, delete, list, conversion, and print files Run, macro, iR compensation, filtering, preconditioning, step functions, and cell control Data plot, overlay and parallel plots, Graphics options, color and font selections Smoothing, derivatives, integration, semi-derivative and semi-integral, interpolation, baseline fitting & subtraction, linear baseline correction, data point removing, data point modification, background subtraction, signal averaging, mathematical operation, Fourier spectrum Calibration curve, standard addition, data file report, concentration – time dependence report and plot. Digital simulation, user defined mechanisms Data information, data listing, equations, clock, toolbar, status bar Context sensitive help Purge, knock, stir controls for mercury electrode Maximum data length: 128K-8192K selectable

Life time upgradation of software is required along with the system. .

Desktop Computer with 500 GB Hard Disc, 4GB RAM, 18.5" LED Monitor, DVD Writer with Standard Configuration.

Cell Stand with Faraday cage

Input gas line connection should be easy and quick. Manual or Remote on-off control of gas purge-blanket. Manual control of gas purge blanket rate. Manual or remote on-off control of magnetic stirrer. Adjustments of magnetic stirrer rate should be controlled manually. Voltammetry cell cap. Small volume glass cell vials. Mounted cell top compatible with electro-chemical accessories are required

Essential Accessories required

Sample holder for Pellets & solid (bulk) samples.

10. High temperature Muffle Furnace – 1 No.

A Muffle furnace is required for experiments at high temperatures. This furnace should have following features:

1	Internal Dimensions of the furnace (Depth xWidth x Height) in mm	150x150x150 (Minimum)
2	Working Temperature	1500°C or better
3	Continuous working temperature	1500°C or better
4	Heating Elements	Molybdenum di silicide heating elements
6	Temperature Accuracy	±1°C or better
7	Temperature uniformity across the inner chamber	±2°C or better
8	Temperature Control	Through microprocessor based PID controller with minimum 30 steps with LCD display
8	Thermocouple type	R type thermocouple – inserted through the rear wall with cables of sufficient length
9	Furnace Insulation and Refractory	Refractory used for heat insulation should be of high quality and multi-layered to ensure minimum heat loss. Fan cooling may be provided for maintaining low skin temperature as an option.
10	Power supply	220 V,50/60Hz single phase
10	Outer body and inner body	Stainless Steel with powder coating finish on outside
11	Accessories required:	(i) Stainless steel Tongs (15-20 inches) – 2 Nos

		(ii) Furnace gloves – pairs (iii) Extra heating elements – 2 Nos (iv) Extra thermocouple – 1 No
12	Safety features	(i) Earthing terminal to avoid electrical leakage (ii) Fuse to save from sudden surges (iii) Robust door locking system
13	Warranty and replacement	Minimum warranty period of 2 years required – any faulty part should be replaced by the manufacturer free of cost with not more than 15 days delay within the warranty period.

11. UV-Visible NIR Spectrophotometer – 1 No.

1. **Optical system:** Czerny-Turner mount Single monochromator Fully symmetrical double beam type
2. **Light source:** Halogen lamp, Deuterium lamp
3. **Wavelength range:** 190 to 2700 nm (3200 nm, optional)
4. **Wavelength accuracy:** +/-0.3 nm (at 656.1 nm) +/-1.5 nm (at 1312.2 nm)
5. **Wavelength repeatability:** +/-0.05 nm (UV-Vis), +/-0.2 nm (NIR)
6. **Spectral bandwidth (SBW):** UV-Vis: 0.1, 0.2, 0.5, 1, 2, 5, 10 nm L2, L5, L10 nm (low stray light mode) M1, M2 nm (micro cell mode) NIR: 0.4, 0.8, 1, 2, 4, 8, 20, 40 L8, L20, L40 nm (low stray light mode) M4, M8 nm (micro cell mode)
7. **Stray light:** 1 % (198 nm KCL 12 g/L aqueous solution) 0.005 % (220 nm NaI 10 g/L aqueous solution)
0.005 % (340 nm NaNO₂ 50 g/L aqueous solution)
0.005 % (370 nm NaNO₂ 50 g/L aqueous solution)
SBW: L2 nm 0.04 % (1420 nm: H₂O) 0.1 % (1690 nm: CH₂Br₂ 50 mm cell)
SBW: L8 nm
8. **Photometric range:** UV-Vis: -4~4 Abs , NIR: -3~3 Abs
9. **Photometric accuracy:** +/-0.0015 Abs (0 to 0.5 Abs)
+/-0.0025 Abs (0.5 to 1 Abs)
+/-0.3 %T Tested with NIST SRM 930D
10. **Photometric repeatability:** +/-0.0005 Abs (0 to 0.5 Abs)
+/-0.0005 Abs (0.5 to 1 Abs) Tested with NIST SRM 930D
11. **Scanning speed:** 10~4000 nm/min (8000 nm/min in preview mode)

12. **Slew speed:** UV-Vis: 12,000 nm/min NIR: 48,000 nm/min
13. **RMS noise:** 0.00003 Abs
(0 Abs, wavelength: 500 nm, measurement time: 60 sec, SBW: 2 nm)
14. **Baseline stability:** 0.0003 Abs/hour (Value obtained more than two hours after turning on the source, when the room temperature is stabilized, wavelength: 250 nm, response: slow and SBW: 2 nm)
15. **Baseline flatness:** +/-0.0002 Abs (200 - 2500 nm)
16. **Detector:** Photomultiplier tube, Peltier cooled PbS
17. **Standard facilities:** IQ accessories, Start button, Analog output
18. **Standard program:** Abs/%T Meter, Quantitative Analysis, Spectrum Measurement, Time Course Measurement, Fixed-Wavelength Measurement, Validation, Daily Maintenance, Macro command (only for iRM), Dual Wavelength Time Course Measurement (only for PC)
19. Power requirements: 150 VA
20. **Installation requirements:** Room temperature: 15-30 Celsius, humidity: below 85%

Compliance Statement to specifications of the equipment

(Compliance with specification column is to be filled up by the bidder stating YES/NO as the case may be)

Sl. No.	Specifications	Requirements	Compliance with Specifications (Y/N)

List of Equipment to be supplied

Sl. No.	Name of Equipment	No. of Units.	Estimated Value (In Rs.)	EMD Amount (In Rs.)
1	Rotary Evaporator	1	4,00,000	10,000
2	pH Meter	1	10,000	250
3	Hot Air oven	1	40,000	1,000
4	Ultrasonic Sonicator	1	30,000	750
5	Centrifuge	1	30,000	750
6	Desiccator	1	40,000	1,000
7	Spin coater	1	50,000	1,250
8	Hot Plate with Magnetic Stirrer	5	50,000	1,250
9	Electrochemical Work Station	1	13,60,000	34000
10	High temperature muffle furnace with a microprocessor based PID temperature controller	1	3,50,000	8,750
11	UV-Visible NIR Spectrophotometer	1	16,50,000	41,250
Total			40,10,000	1,00,250

MODEL BANK GUARANTEE FORMAT FOR FURNISHING EMD

Whereas
(hereinafter called the “tenderer”) has submitted their offer dated.....for the supply of
(hereinafter called the “tender”) against the purchaser’s tender enquiry No. KNOW ALL MEN by these presents that WE of having our registered office at are bound unto (hereinafter called the “Purchaser) in the sum of..... for which payment will and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents. Sealed with the Common Seal of the said Bank this..... day of2017.

THE CONDITIONS OF THIS OBLIGATION ARE:

- (1) If the tenderer withdraws or amends, impairs or derogates from the tender in any respect within the period of validity of this tender.
- (2) If the tenderer having been notified of the acceptance of his tender by the Purchaser during the period of its validity:-
 - a) If the tenderer fails to furnish the Performance Security for the due performance of the contract.
 - b) Fails or refuses to accept/execute the contract.

WE undertake to pay the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that in its demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or both the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force upto and including 45 days after the period of tender validity and any demand in respect thereof should reach the Bank not later than the above date

.....
(Signature of the authorized officer of the Bank)

.....
Name and designation of the officer

.....
Seal, name & address of the Bank and address of the Branch

FORM OF PERFORMANCE SECURITY (GUARANTEE) BY BANK

1. This deed of Guarantee made this day of _____ between Bank of _____ (hereinafter called the “Bank”) of the one part, and Central University of Tamil Nadu, Thiruvarur (hereinafter called “the Purchaser”) of the other part.
2. Whereas the Purchaser has awarded the contract for Supply, Installation, Commissioning, Integration and Validation of _____ (name of the equipment) (hereinafter called the contract) to _____ (hereinafter called the Supplier); (Name of the Supplier)
3. AND WHEREAS the Supplier is bound by the said Contract to submit to the Purchaser a Performance Security for a total amount of Rs. _____ (Amount in figures and words).
4. Now, I/we the undersigned, being fully authorized to sign and to incur obligations for and on behalf of and in the name of _____ (Full name of Bank), hereby declare that the said Bank will guarantee the Purchaser the full amount of Rs. _____ (Amount in figures and words) as stated above.
5. After the Supplier has signed the aforementioned Contract with the Purchaser, the Bank is engaged to pay the Purchaser, any amount up to and inclusive of the aforementioned full amount upon written order from the Purchaser to indemnify the Purchaser for any liability of damage resulting from any defects or shortcomings of the Supplier under the Contract mentioned above, whether these defects or shortcomings are actual or estimated. The Bank will deliver the money required by the Purchaser immediately on demand without delay without reference to the Supplier and without the necessity of a previous notice or of judicial or administrative procedures and without it being necessary to prove to the Bank the liability or damages resulting from any defects or shortcomings of the Supplier. The Bank shall pay to the Purchaser any money so demanded notwithstanding any dispute/disputes raised by the Supplier in any suit or proceedings pending before any Court relating thereto and the liability under this guarantee shall be absolute and unequivocal.
6. This Guarantee is valid for a period of thirty six months from the date of signing. (Initial period for which this Guarantee will be valid must be for at least thirty (30) days longer than the anticipated expiry date of warranty period).
7. At any time during the period in which this Guarantee is still valid, if the Purchaser agrees to grant a time extension to the Supplier or if the Supplier fails to complete the work within the time of completion as stated in the Contract, or fails to discharge himself of the liability or damages as stated under Para 5 above, the Bank shall extend this Guarantee under the same conditions for the required time on demand by the Purchaser and at the cost of the Supplier.

8. The Guarantee hereinbefore contained shall not be affected by any change in the Constitution of the Bank or of the Supplier.

9. The neglect or forbearance of the Purchaser in enforcement of payment of any moneys, the payment whereof is intended to be hereby secured or the giving of time by the Purchaser for the payment hereof shall in no way relieve the bank of its liability under this deed.

10. The expressions "the Purchaser", "the Bank" and "the Supplier" hereinbefore used shall include their respective successors and assigns.

In witness whereof I/We of the bank have signed and sealed this guarantee on the _____ day of _____ (Month & Year) being herewith duly authorized.

For and on behalf of the _____ Bank.

Signature of Authority

Bank official Name: Designation:

Stamp/Seal of the Bank:

Signed, sealed and delivered for and on behalf of the Bank by the above named _____ in the presence of:

Witness 1

Signature

Name

Address

Witness 2

Signature

Name

Address

Declaration

We hereby undertake that there are _____ pages, serially numbered, in the submitted tender including the supporting documents.

(Please number all the pages including blank page, if any).

Signature and seal of the bidder