



Alagappa University
(Accredited with "A+" Grade by 'NAAC' in the Third Cycle)
Karaikudi – 630 003



Ref: A1/Tender/11719/Analytical/17

Dt:03/11/17

Tender Notice

Sealed Tenders are invited by the undersigned from reputed companies for the supply and installation of the following equipment.

Sl. No	Name of the Equipment	Approx. Value in Lakhs.	Cost of Tender Schedule Rs.	EMD (Demand Draft) Rs.
1.	Analytical Toolbox	Rs. 30	Rs. 9,000 +GST 12% extra	30,000

Tender documents can be had from the undersigned on payment towards cost of Tender Schedule as mentioned above, by demand draft drawn in favour of **The Registrar, Alagappa University, payable at Karaikudi.**

Filled in Tenders both Technical and Commercial bid in Separate Sealed Covers put into a Single big cover should reach on or before 22/11/2017 upto 03.00 p.m and the technical bid will be opened at 4.00 p.m on the same day.

For further details visit our website www.alagappauniversity.ac.in and www.tenders.tn.gov.in

The undersigned reserves the right to accept or reject or cancel any tender in part or in full without assigning any reason.

Place: Karaikudi
Date: 03/11/2017

Prof.V.Balachandran,
REGISTRAR i/c.

ALAGAPPA UNIVERSITY, KARAIKUDI

Ref:A1/Tender/11719/17

Dt: 03/11/17

SEALED TENDERS IN DUPLICATE under “two cover system” are invited from reputed firms for the supply of “ANALYTICAL TOOLBOX” to this University, so as to reach the THE REGISTRAR, ALAGAPPA UNIVERSITY, KARAIKUDI. 630 003 on or before and should be superscribed as follows:

“TENDER REF.NO.Ref: A1/Tender/11709/17 due on 22/11/17

- . The same will be opened by the Registrar or any of his authorized representatives in the presence of such of those tenderers or their duly authorized agents who may be present at that time. The date of opening the tender will be intimated later.
 - (i) The prices quoted should be in Indian Rupees / Foreign Currency and should include taxes, Central Excise and customs Duty if any, freight to destination and levies and should be for delivery at Alagappa University, Karakudi 630 003.
 - (ii) The tenderers are requested to quote their GST Registration Number in the Tender form without fail. The University is authorized to withhold the amount of tax until the party produces an order of the court of competent jurisdiction, declaring the liability of the transaction to “GST”.
 - (iii) Ownership of materials shall rest with the supplier until the same is delivered to this University in good condition.
- Every Tender should be accompanied by an EMD of **Rs.30,000/-** through Demand Draft drawn in favour of the Registrar, Alagappa University payable at Karaikudi. **The fact of remittance of EMD should be superscribed on the outer cover of the tender. Tender covers without such superscription will not be opened.** The deposit of successful tenderer which will carry no interest will be refunded only after the satisfactory completion of the supply of materials ordered and audit of accounts thereto. Request from firms for waiver of tender deposit will not be considered. No adjustment from the amount due to tenderer will be permitted to be treated as deposit for this tender. **Tenders without EMD will not be considered.** Registered small scale industries who provide evidence of existence from competent authorities will be exempted from payment of EMD. In respect of unsuccessful tenders, the EMD will be released after finalization of tender.
- No communication from any tenderer adding to / altering or explaining any terms of the tender will be considered after the opening of the tenders by the Registrar. If any tenderer withdraws his tender after the tenders are opened, his tender

deposit is liable to be forfeited. Supplies should be effected within the delivery period quoted with tendered rates, failing which the tender deposit of the successful tenderer will be forfeited, and the order placed also cancelled at their risk and cost. Conditional offer such as subject to prior sales etc. are liable to be summarily rejected.

- The Registrar, Alagappa University, Karaikudi reserves **the right to accept or reject** any tender either partly or wholly without assigning any reason therefore.
- The quantities mentioned are only tentative and are liable to be added or subtracted.
- No suit or any proceedings in regard to any matter arising in any respect under this contract shall be instituted in any Court save in the District Munsif Court or Sub Court at Sivaganga. It is agreed that no other Court shall have jurisdiction to entertain any suit or proceedings even through part of the cause of the action raised within their jurisdiction. In case of any part of cause of action arises within the jurisdiction of any of the Court in Tamil Nadu and not in the Court of Sivaganga then it is agreed to between the parties that such suits or proceedings shall be instituted in a court within Tamil Nadu and no other court outside Tamil Nadu shall have jurisdiction even though any part of the cause of action might arise within the jurisdiction of such courts.
- The successful tenderer should arrange to supply the equipment as per terms of the accepted tender. **Full payment will be made to the supplier only after the receipt of the materials at site in good condition and after making necessary tests. Any loss or damages in transit should be made good by the supplier at free of cost. The advance payment will not be made under any circumstances.** Defects in manufacture if any detected at any time should be rectified at free of cost.
- The decision of the Registrar is final in respect of defective equipment. Quantities given in the tender are subject to alteration at the time of placing orders by the University.
- The Successful tenderer should produce income-tax clearance certificate. In the case of partnership firms, this should be produced for each of the partners and the firm.
- The tender should be valid for a period of 120 days from the date of opening.
- Warranty/Guarantee period should be specified.
- AMC of equipment should be quoted in the Tender for adopting after completion of the warranty period.

- Only parties who agree to abide by the above terms and conditions may send tenders and submission of tenders against this specification would signify such acceptance of the above terms and conditions by the tenderers.
- Tenderers should specifically note that their tenders are liable to be summarily rejected if
 - the rate quoted is not F.O.R. destination
 - complete technical details of the products as the case may be are not sent with the tender
 - validity period is not indicated
 - EMD is not remitted
- Detailed Specifications of the equipment required are enclosed.
- The bidder must quote for all the products as per the tender and must comply with all the tender specifications as per the tender.
- **TECHNICAL BID: FIRST COVER**

The FIRST COVER should contain the following:

- Tender documents duly completed and signed but WITHOUT INDICATING THE RATE QUOTED.
 - The technical details of the models offered along with the supporting original technical literature, leaflets, brochures etc.
 - Earnest money
 - Cost of tender form if down loaded from the website.
 - Details of supplies of similar equipment along with copies of supply orders.
 - Latest agreement/authorization from the foreign firms in case of Indian agent is submitting tender on its behalf.
 - Trade registration certificate from the RBI/Ministry/department concerned.
 - Latest income tax clearance certificate/ copy of PAN card/TIN.
 - Latest Tax clearance certificate.
 - Technical bulletin with specifications clearly stated with model.
- **PRICE BID: SECOND COVER**
SECOND COVER should contain the following:
 Details of rates, taxes, duties, discounts, if any, quoted by the bidder, should be submitted.
 Any documents in support of price bid.
 For Indian manufacturer rate should be at F.O.R destination.
 For foreign supplier rates should be at CIP .

NOTE

(i) The word “**TECHNICAL BID**” should be written clearly and prominently on the first cover along with tender number, name of the equipments and date of opening. Similarly, the work “**PRICE BID**” should be written clearly and prominently on the second envelop along with Tender Number, Name of Equipments.

Full name and status of the person signing the tender documents must be clearly mentioned in the Tenders.

Tender unsealed or having overwriting and cutting without proper attestation and signature will not be considered.

(ii) An EMD i.e. Rs. 30,000/- through a Demand Draft drawn in favour of “The Registrar, Alagappa University and payable at Karaikudi should accompany the tender. Last date for receipt of tenders is upto 3.00 p.m on 22/11/2017 and the technical bid will be opened on the same day at 4.00 p.m

REGISTRAR

TECHNICAL SPECIFICATION

Analytical Toolbox for investigation of complete DSSC devices

The Toolbox a flexible analytical equipment for investigation of complete Dye-sensitized solar cells (DSSC) user-friendly product that allows DSSC researchers to perform device investigation.

Toolbox should be designed for small-modulation transient measurements for rapid determination of electron lifetimes and electron transport times in DSSC devices up to an active area of 1 cm^2 . Accordingly, it opens for efficient calculations of e.g. the collection yield of a DSSC device. Furthermore, electron accumulation in the mesoporous electrode of the DSSC can be determined by charge extraction measurements. In addition, standard IV-curves can be recorded at different light-intensities up to 1 sun equivalent ($1 \text{ sun} = 1000 \text{ W/m}^2$, AM1.5G) using white light emitting diode (LED) illumination.

should include:

- Electron transport time under short-circuit conditions
- Electron lifetime under open-circuit conditions
- V_{OC} decay
- Photocurrent transients
- Charge extraction (from short-circuit or open-circuit conditions)
- J_{SC} vs Light intensity
- V_{OC} vs Light intensity
- Current –voltage curves (at different light intensities and in the dark)
- Toolbox instrument
- Measurement setup with light source and solar cell holder mounted in light-proof enclosure
- Computer, preconfigured with Toolbox software
- Current amplifier (Thorlabs PDA200C)
- English manual
- Full set of cables

Toolbox specifications

<u>Specification</u>	<u>Value</u>
Data acquisition	16 bit DAQ, 500 kSPS maximum sampling rate
Maximum voltage	±10 V
Voltage measurement accuracy	250 µV (±1 V range)
Maximum current	±5 mA
Current measurement accuracy	5 µA
DAQ board	National Instruments USB-6343
Max time jitter between light switching and charge switching	1 µs
LED driver type	Current control
LED driver maximum modulation rate	200 kHz
LED rise/fall time	<5 µs
LED driver maximum current	1 A
Light intensity	0 – 1.5 sun equivalent
LED wavelength options	Broadband natural white 450-660 nm (recommended), 457 nm, 525 nm, 590 nm, 625 nm
Current amplifier	Thorlabs PDA200C
Connectors (main instrument)	4x BNC (Solar cell, LED, Current Amplifier Out & Return) USB 2.0 Type B Power Inlet C14 acc. to IEC 60320 (100-240 V 50/60 Hz 2.5 A Fuse)