UNIVERSITY INSTITUTE OF CHEMICAL ENGINEERING & TECHNOLOGY

PANJAB UNIVERSITY, CHANDIGARH

TENDER DOCUMENT FOR PURCHASE OF EQUIPMENTS

TENDER NOTICE NO: UICET/SAP/PU/Equipments/2013/01

LAST DATE FOR RECEIPT OF TENDER: February 13, 2013 by 3.00 p.m.

DATE & TIME OF OPENING: February 18, 2013 at 3.00 p.m.

PRICE Rs. 1,000/-

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DATE AND TIME OF OPENING: February 18, 2013 at 3.00 p.m.

NAME AND ADDRESS OF: _____

TENDERER

TELEPHONE NUMBER, FAX: _____

AND E-MAIL ADDRESS OF THE TENDERER _____

TENDER PURCHASE DETAILS:

The Tender document is available on the university website:http://tenders.puchd.ac.in. The document must be accompanied with an A/c payee demand draft of Rs. 1,000/-. The demand draft must be in favour of The Registrar, Panjab University, Chandigarh, payable at Chandigarh only.

Demand Draft No. _____

Dated _____.

P.S:- i) For each instrument, the bid should be accompanied with an A/c payee demand draft of Rs. 1,000/-

ii) For each instrument, separate bid should be submitted.

Contd.

EARNEST MONEY DETAILS:

(i) a) Rs. 25,000/- through demand draft for Dynamic Light Scattering (DLS)

b) Rs. 20,000/- through demand draft for Atomic Absorption Spectrometer (AAS)

c) Rs. 15,000/- through demand draft for Differential Scanning Calorimeter (DSC)

The demand draft(s) should be A/c payee in favour of The Registrar, Panjab University, Chandigarh and payable at Chandigarh only. The validity of demand drafts towards Earnest Money Deposit (EMD) should be for a period of Three (03) months.

(ii) Demand Draft No. _____ dated _____

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SECTION – I

Invitation for Bids, General Rules and Terms & Conditions for Tender

1. This invitation to tender is for the supply of i) Dynamic Light Scattering (DLS) , ii)Atomic Absorption Spectrometer(AAS) and iii) Differential Scanning Calorimeter (DSC) for use in UICET, Panjab University. The tender is liable to be rejected because of any misrepresentation by the firm.

2. The requirements of the Institute in terms of category of equipment, detailed specifications and quantity are given in the enclosed list. Any change in the terms that are beneficial to the University can be carried out before the opening of the commercial bids.

3. Tenders will be rejected in case draft of Rs.1,000/- is not attached to the tender document.

4. Tenderers are advised to study all pre-qualification, technical and commercial aspects of the tender document carefully. Submission of Tender shall be deemed to have been done after careful study and examination of the Tender Document with understanding of its implications.

5. i) Sealed offers prepared in accordance with the procedure enumerated in Section II, giving full detailed specifications of the equipments, should be in favor of Coordinator (SAP), DRS Programme, UICET, Panjab University, Sector-14, Chandigarh, not later than the date and time laid down, at the address given in the schedule for invitation to tender.

   ii) **The sealed offers should be submitted in the office of this Institute- UNIVERSITY INSTITUTE OF CHEMICAL ENGINEERING & TECHNOLOGY, (UICET), Panjab University, Sector-14, Chandigarh-160014 (India)**.

6. The tenderer should indicate specifically the Basic Price, Custom duty/Excise duty, other duties (if any), and levies chargeable quantitatively against each item. No additional information/ clarifications will be entertained after due date. The Coordinator may reject tenders if they do not carry such information separately and specifically, quantitatively.

7. The bids should indicate clearly that the rates are F.O.R. UICET, P.U., Chandigarh/ CIF, New Delhi.

8. The tender should be submitted in Three cover system i.e. a, b and c. There should be proper indication of the contents on cover of each envelope as indicated in section II.

9. The Demand Draft must be in a separate sealed envelope indicating the amount, tender Notice Number and due date and enclosed with the bid (please see section II for details).

10. The tenderer should clearly indicate the delivery period and validity period of tender, which in no case should be less than 90 days. However, the period of validity of the tender is extendable upto 120 days.

11. The tenderer should clearly indicate the availability of service and maintenance facilities at Chandigarh for the items quoted.

12. The above mentioned details particularly the VAT, Sales Tax, custom duty/excise duty, any other duty, if not quoted properly, can render the bid invalid.

13. The tenderer is required to **quote for each item separately** in terms of basic price and all other charges. Prices can be quoted in Indian as well as in Foreign Currency.

14. The Tender should be submitted along with the Earnest Money in the shape of Draft valid for a minimum period of three (03) months in favor of The Registrar, PU, Chandigarh. In all cases the interest of PU should be safeguarded, if in any case at a later stage the **Earnest Money Deposit (EMD)** is required to be forfeited because of non-supply/non-providing of demonstration, failure to properly install and commission the equipment, or for any other fault of the firm. Tenders not accompanied by Earnest Money or incomplete in any respect will be rejected outright.

15. The tenderer must indicate the list of prominent institutions /organizations particularly in and around Chandigarh, where the same equipment has been supplied during the last three years.

16. The tender must be submitted along with the copies of :

    a) Manufacturers license or authority from the manufacturer

    b) Latest Income Tax Clearance Certificate

    c) Sales Tax Registration Certificate

17. The Coordinator (SAP), DRS Programme, UICET, Panjab University, Chandigarh, reserves the right to reject any or all tenders without assigning any reason whatsoever.

18. The tenders will be opened on the date and time indicated in the presence of tenderers present on the occasion, if any. If the date of opening is declared to be a holiday the tenders will be opened on the next working day. The University will not be responsible for any delay in the submission of the tender document by the postal authorities/courier companies, which is received after the last date/time.

19. In case, the item(s) is/are to be imported for supply, irrevocable letter of credit will be opened with the Bank. In case the shipping documents viz-invoice, packing list, airway bill (AWB), delivery-note, etc are supplied late by the firm, the demurrage levied, if any, by the Airport authorities will be borne by the firm.

    However, in case the equipment is supplied indigenously no advance payment or payment against proforma invoice will be made. 90% payment will be made after receipt, inspection, installation/testing of the equipment and certification by the concerned teacher/Lab in charge and The Coordinator (SAP), DRS Programme, UICET. The balance 10% payment will be released after satisfactory performance. The firm can be asked to give the demonstration of the equipment even before the order is placed with it.

20. All damaged or unapproved goods shall be returned at the Tenderer risk and cost and the incidental expenditure thereupon shall be recovered from the concerned party.

21. Printed conditions of the firm sent along with the quotation, if any, shall not be binding on us.

22. Packing list must be put in all packages.

23. All charges e.g. packing, freight, insurance etc., if payable, in terms of Tendered quotation and accepted by us should be supported by voucher/money receipts etc.

24. On acceptance of tender, the date of delivery should be strictly adhered to otherwise The Coordinator (SAP), DRS Programme UICET, Panjab University, Chandigarh reserves the right not to accept the delivery in full or in part and to claim liquidated damages @1% per month of the value of the order unless extension has been granted by The Coordinator (SAP), DRS Programme UICET, Panjab University, Chandigarh specifically and in case the order is not executed within the stipulated period. Panjab University will be at liberty to make purchases through other sources at the risk and cost of the defaulting firm, and to forfeit the earnest money of the tenderer besides claiming damages.

25. No claim on account of payment of octroi etc. within the limits of the Municipal Corporation, Chandigarh shall be accepted.

26. The articles if are supplied on 'Bill', the payment will be made by crossed account payee cheque on receipt of the articles in good condition and after being installed and commissioned to the satisfaction of The Coordinator (SAP), DRS Programme, UICET, Panjab University, Chandigarh. The decision to purchase each item is taken independent of other items quoted by the firm. There is no binding on the institute to purchase all the items quoted by any particular firm.

SECTION – II

Procedure for Submission of Bids

1. Each bid must be accompanied with a draft of Rs. 1,000/-. The tender documents along with the details are available on the Panjab University web site.

2. There will be three Cover System for this tender.

   a. Pre-qualification documents (in duplicate) in one cover.

      Pre qualification will require

      • Sales Tax No.

      • I.T. clearance

      • Authorization from OEM if applicable

      • EMD draft

   b. Technical Bid (in duplicate) in one cover.

   c. Commercial bid (in duplicate) in one cover.

3. Each copy of the Pre-qualification document should be covered in a separate sealed cover superscribing the words: 'Pre-qualification document': Each copy should be marked as "Original Copy" and 'First copy'. Both the copies should be put in a single sealed cover superscribing the words 'Pre-qualification document'.

4. Each copy of Technical Bid of the tender should be covered in a separate sealed cover superscribing the words "Technical Bid". Each copy should be marked as "**Original Copy**" and "**First Copy**". Both the copies should be put in a single sealed cover superscribing the words "**Technical Bid**".

   The name of the equipment should be mentioned on the envelopes for which the bids are submitted.

5. Each copy of Commercial Bid of the tender should be covered in a separate sealed cover superscribing the words "Commercial Bid". Each copy should be marked as "Original Copy" and "First Copy". Both should be put in a single sealed cover

superscribing the words “Commercial Bid”. Commercial Bid should only indicate prices (preferably item wise).

The name of the equipment should be mentioned on the envelopes for which the bids are submitted

6. All the three documents i.e. Pre-qualification, sealed Technical Bid envelope and sealed Commercial Bid envelope prepared as above are to be kept in a single sealed cover super scribed with Tender Number, Due date and the wordings **“DO NOT OPEN BEFORE 3.00 p.m. on February 18, 2013.**
7. The cover thus prepared should also indicate clearly the name and address of the tenderer to enable the Bid to be returned unopened in case it is declared “late”.
8. Each copy of the tender should be a complete document and should be bound as a volume. Different copies must be bound separately.
9. The bids prepared by the tenderer and all correspondence and documents relating to the bids, shall be written in English language and any printed literature furnished by the tenderer written in any other language must be accompanied by English translation, failing which, tender is liable to be rejected.
10. For each equipment separate bid(s) should be submitted.
11. The Demand draft should be A/c payee in favor of The Registrar, Panjab University, Chandigarh, payable at Chandigarh only.

Technical Specifications

Specifications for Dynamic Light Scattering (DLS)

1. Particle size measurement range : 0.6 nm to 8 microns
2. Sample volume measurement : less than 60µl for particle size measurement and less than 2ml for zeta potential measurement
3. LASER source, having wavelength less than 650 nm and power of 10 mW
4. Measurement angle : 173^{o} -180^{o}
5. Temperature range : 0-90^{o}C
6. The system should have photodiode detector or photomultiplier tube to maximize the concentration sensitivity of the system.
7. Suitable auto-titrator should be provided.
8. Zeta potential measurement using Electrophoresis.
9. Zeta potential measurement range : -150 mV to +150mV
10. Conductivity range : 0-200 mS/cm
11. System should be able to analyze high concentration and low concentration samples.
12. Molecular weight determination facility using static/dynamic light scattering principle while changing sample concentration and using Debye plots.
13. For particle diameter, accuracy should be ±2% using NIST traceable polystyrene latex standard of diameter 100 nm and concentration of 100 ppm. The repeatability should be less than 3%.
14. Software should have the following features:
    - Measurements with manually defined parameters or by defining a 'Standard Operating Procedure' or can create Navigation Wizard.
    - Compatible with latest Windows based operating system.
    - Trend plots to allow plotting any one measured parameter from selected records versus the second parameter.
    - Facility for overlaying several plots with facility to export plots.

- Results should be exported to word processing packages or spreadsheets using a template or cut and paste.
- Access to all measured data including correlation functions, fitted data points, residuals and all experimental parameters should be possible. The same might be stored for subsequent examination.
- Ability to edit sample data parameters to allow recalculation of measured data.

15. For data acquisition, the system should be quoted with latest version of branded PC, laser printer, uninterrupted constant voltage power supply etc.

16. Warranty period of atleast one year with AMC for additional two years.

Optional Accessories:

a. One pair of sample cuvette.

Specifications for Atomic Absorption Spectrophotometer/ Spectrometer (AAS)

1. PC controlled fully automated for flame AAS with strong D2 background correction.
2. 8 lamp turret facility along with auto alignment.
3. Independent power supply for each lamp and two heating circuits for lamp pre heating.
4. Double beam mode of operation.
5. Czerny turner monochromator with two focal lengths.
6. Wavelength range : 185 to 900 nm
7. Holographic grating with 1800 lines/mm
8. Automated slit selection from 0.2 nm to 1.4 nm
9. Single element HCL Lamps to be quoted ---- Na,Cu,Fe,Cr,Pb,Ni,Mn,Mg,Ca,As, Si,Zn,Ti,Sr,P,Al,Ba,Li,K, Se with single element standards.
10. 10 years warranty on all high end optical components
11. All titanium 5 cm burner for Air/Acetylene and Acetylene/Nitrous oxide flame and 10cm burner for Air/Acetylene flame. Burner should be coded for automatic recognition.

12. Dual purpose PTFE spray chamber for use with aqueous and organic solutions.
13. Computer controlled gas flow box for monitoring and control of fuel/oxidant ratio.
14. Computer controlled automatic flame ignition
15. High safety standard with sensor control of flame, gas type and pressure, gas relief value in the spray chamber and siphon sensor control.
16. Safety interlocks for automatic shutdown of gases in case of over pressurization of spray chamber, flame not detected and system power failure.
17. Advanced operating software for system operation and control along with cookbook prescriptions for all elements.
18. The system should be quoted along with all relevant accessories like air compressor, acetylene gas cylinder and regulator, nitrous oxide gas cylinder with regulator, fume hood, computer and printer , uninterrupted power supply etc.
19. Spares for 3 years trouble free operation should be provided.
20. AMC after expiry of warranty period.

Optional accessories

- Segmented flow accessory for analysis of small volume samples (from 150ul) and samples with strong matrix influence.
- Flame auto sampler with automatic dilution facility for maximum sample through put.
- Hydride Generation accessory with both batch and continuous flow mode having optional integrated amalgamation unit for best detection limits of Hg.
- Electrothermal heating for Hydride attachment.

Specifications for Differential Scanning Calorimeter (DSC)

1. Fully modular and expandable Differential Scanning Calorimeter operating on Heat Flux System.
2. Temperature Range: ambient to 700^{o}C (provision for upgradation to -200^{o}C-1000^{o}C in future)
3. Temperature precision : $\pm$ 0.1^{o}C

4. Temperature accuracy : ± 0.2^{o}C
5. Heating rate : 0.1 to 100 ^{o}C/min
6. Calorimetric precision : ± 0.1%
7. DSC amplifier measurement range : ±350 mW
8. Atmosphere : inert, oxidative with automatic gas switching with digital mass flow controller.
9. Aluminium crucibles/pans with lid : 10×300 pcs.
10. Warranty period of atleast one year with AMC for additional two years.

Other features:

a. Equipment should be capable of analyzing solid and liquid samples.

b. Equipment should have cooling option.

c. Equipment should have calibration option for temperature and heat flow. It should not need recalibration when changing sample pans, heating rate, gases etc.

d. Equipment should be supplied with calibration standards.

e. Equipment should be supplied with standard sample pan cripper. It should be provided with tool kit for both temperature and heat flow.

f. System should be upgraded to minimum 45 place autosampler and modulation techniques for fast and accurate response.

g. Software should provide real time instrument status, data display during experiment, real time method interaction and modification.

h. Software should have the facility of auto and manual data analysis such as baseline selection and correction, data smoothening, plot expansion etc.

i. Software should have networking capability. Data obtained should be transferrable to MS-Office.

j. For date acquisition, the system should be quoted with latest version of branded PC, laser printer, uninterrupted constant voltage power supply etc.