Case# 1085 Tender # CIIT-TN-13-14-398

# TERMS AND CONDITIONS

## [All pages (BoQs & Terms & Conditions) are mandatory to be signed /stamped, Rates should be quoted on our prescribed format, failing which the bid may be rejected]

1. The contract will be executed and handed over in satisfactory conditions up to the entire satisfaction of COMSATS Institute of Information Technology, Lahore Campus.

2. Documents along with Pay Order / Demand Draft amounting **Rs. 1,000/-** as a tender documents fee (Non-Refundable) in favor of COMSATS Institute of Information Technology, Lahore to the address given below. No bid will be accepted without tender documents' fee

3. Part / Advance payments is not allowed.

4. The exact completion/delivery time from the date of the purchase / work order will be **120 days**. The handing over / completion time for this contract is of critical importance.

5. The bid proposal should be inclusive of all freight and packaging charges and will be delivered at Lahore Airport.

6. **L/C will be opened by COMSATS Institute of Information Technology Lahore Campus.**

7. **Custom clearance will be cleared by COMSATS Lahore Campus**.

8. COMSATS Institute of Information Technology, Lahore Campus, will follow the PPRA rule of **single stage two envelope procedure;**

    i. The bid shall comprise a single package containing **two separate envelopes.** Each envelope shall contain separately the **financial proposal** and the **technical proposal**;

    ii. The envelopes shall be marked as **"FINANCIAL PROPOSAL"** and **"TECHNICAL PROPOSAL"** in bold and legible letters to avoid confusion;

    iii. Initially, only the envelope marked **"TECHNICAL PROPOSAL"** shall be opened;

    iv. The envelope marked as **"FINANCIAL PROPOSAL"** shall be retained in the custody of the procuring agency without being opened;

    v. The procuring agency shall evaluate the technical proposal in a manner prescribed in advance, without reference to the price and reject any proposal which does not conform to the specified requirements;



**Signature of Contractor with Stamp**

vi. During the technical evaluation no **amendments** in the technical proposal shall be permitted;

vii. The financial proposals of bids shall be opened publicly at a time, date and venue announced and communicated to the bidders in advance;

viii. After the evaluation and approval of the technical proposal the procuring agency, shall at a time within the bid validity period, publicly open the financial proposals of the technically accepted bids only. The financial proposal of bids found technically nonresponsive shall be returned un-opened to the respective bidders;

ix. and

x. The bid found to be the lowest evaluated bid shall be accepted.

9. Bidders who do not qualify cannot challenge the finding of the evaluation.

10. The bids should be submitted in a sealed envelope up to **12-09-2014** on or before **11:00 hrs** and will be opened on the same date **at 11:30 hrs** in the presence of available bidders.

11. The envelope should be marked as under.

    **Secretary Purchase Committee**
    **COMSATS Institute of Information Technology, Lahore Campus.**
    Defence Road, Off Raiwind Road, Lahore.
    Tel: 042-111-001-007, Ext: 875

12. The envelope shall also bear the word **"CONFIDENTIAL"** and following identification quotation of **"Atomic Force Microscope (AFM) for Physics Department".**

13. The bid form (Annex-I) must be duly filled in, stamped and signed by the authorized representative of the bidder.

14. If the vendors fail to deliver the order in time then the vendor will be charged penalty as under:-
    a. 1% per day of the invoice price for 5 working days.
    b. 2% per day of the invoice price for further 5 working days.
    c. If the vendor fail to deliver the items during the extended then the supply order will be cancelled, earnest money and payment will be forfeited.

**15.** All prices should be quoted in **C&F with all freight charges.**

16. All prices should be valid for at least **120 days.** Withdrawal or any modification of the original offer within the validity period shall entitle CIIT to forfeit the earnest money in favor of the CIIT and / or put a ban on such vendor participation in CIIT tenders / works.

17. It is the sole responsibility of the agent / supplier / manufacturer to comply with the applicable laws, be national or international.

18. In case of any dispute, decision of the Director CIIT-Lahore, will be final and binding upon the parties.



**Signature of Contractor with Stamp**

19. The CIIT-Lahore reserves the right to modify equipment specifications/quantities at any time before the award of work.

20. The bidder is required to furnish in form of Bank deposit /C.D.R / Pay order equivalent to **2%** of the total Bid price as Earnest Money crossed in favor of "COMSATS Institute of Information Technology, Lahore Campus". Any bid not accompanied by Earnest Money shall be rejected without any right of appeal.

21. Warranty will be on the part of supplier, which is **One Year Warranty** after the completion of supply /work.

22. The successful bidder will have to submit the **05% of the total amount of Purchase Order in the form of Bank Guarantee / CDR as a Security/Retention Money** at the time of supply/ delivery in the favor of COMSATS Institute of Information Technology, Lahore Campus. The Warranty duration will be started after the installation/Satisfactory certificate date of Equipment which is **One Year**,

23. COMSATS Institute of Information Technology, Lahore Campus, reserves the rights to accept or reject any or all bids without assigning any reason whatsoever.

    **No offer of a supplier/firm will be considered if: -**

    i. Received without earnest money
    ii. Received later than the date and time fixed for tender submission
    iii. The tender is unsigned/ unstamped
    iv. The offer is ambiguous
    v. The offer is conditional
    vi. The offer is from a firm, which is black listed, by any Govt. Office.
    vii. The offer is received by telephone/telex/fax.
    viii. Any unsigned / ambiguous erasing, cutting / overwriting etc. is made.

24. The tendered should furnish a certificate as worded below in token of acceptance of all the terms and conditions of the tender. Otherwise the tender will not be considered under any circumstances.

I / We

- Company / Vendor Name:……..
- Postal Address:…….
- Tel. / Mobile:……Email:……..
- NTN # :……GST#:……

the undersigned certify that the terms and conditions as contained in the documents vise, " Terms and Conditions for Tender Notice of COMSATS Institute of Information Technology, Lahore are accepted and that in the event of selection of my/our rate the agreement in the prescribed form will be entered into.



**Signature of Contractor with Stamp**

**BoQs of Atomic Force Microscope (AFM) for Physics Department , CIIT Lahore**

| Sr. # | Item Name | System Specification | Have you provided/facilitated this in your offer? | | Qty | Rates to be quoted in C&F Lahore with all freight charges | | |
|---|---|---|---|---|---|---|---|---|
| | | | Yes | No | | Quoted Model/Make | Unit Price(C&F Lahore Airport) | Total Price (C&F Lahore Airport) |
| 1 | **Atomic Force Microscope (AFM)** | General Requirement | | | **01 No** | | | |
| | | A sample-scanning system, maintaining the X, Y and Z position of the tip with respect to the laser and photodetector position (Make/origin: USA, UK, Europe, Japan). or equivalent | | | | | | |
| | | Required Optics Features | | | | | | |
| | | Optics FOV 1.25mm - 0.25mm, 5x software controlled, motorized, 3.3:1 continuous optical zoom, 2 µm optical resolution with standard 10x objective, 0.75 µm optical resolution with optional 50x objective, clearly resolves 1 µm grid. On axis optical view without any parts (such as prisms) between objective and tip/sample. Bright white-light LED illumination under software control, thermally shielded from AFM head and scanner. | | | | | | |
| | | Required System performance | | | | | | |
| | | The system should have atomic resolution on graphite or mica with the large area scanner ≥ 90 µm XY, demonstrable.<br>(1) System noise floor in Z, open loop < 0.05 nm (< 50 pico-meter) RMS or better, on large area (90 µm XY) scanner<br>(2) Closed-loop XY noise < 1.2 nm RMS at 1kHz bandwidth<br>(3) Z-linearizer noise < 0.2 nm RMS<br>(4) Open loop XY drift should be < 1 nm/min | | | | | | |
| | | Required Microscope Features | | | | | | |
| | | Non-vertical beam bounce scheme for optical lever Orthogonal laser alignment Kinematic head mount | | | | | | |
| | | Required Scanner Features | | | | | | |



**Signature of Contractor with Stamp**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | XYZ tube scanner design, Opto-mechanical scan linearization compensating for piezo hysteresis, creep, and nonlinearity. Position sensors mounted to actual scanner Unipolar voltage driving scanner in XYZ, Closed loop Z for force curves and lift mode. System allows turning off closed loop. | | | | | | |
| | | Required Modes and Options | | | | | | |
| | | autotune and auto-phase-adjust, cantilever resonance and adjusting phase measurement with a single click. | | | | | | |
| | | The system must be able to perform all the modes without changing and removing scan head.<br>(1) Contact mode<br>(2) Tapping mode<br>(3) Lateral Force Microscopy<br>(4) Phase Imaging<br>(5) Dual pass scanning technique highly preferred<br>(6) Liquid mode<br>(7) Conductive AFM<br>Also need for other applications without changing and removing scan head: Scanning Tunneling Microscopy (STM), Electrochemical Scanning Probe Microscopy (ECSPM), Conductive Atomic Force Microscopy (CAFM),Nano indentation, Nanolithography, Nano Thermal Analysis (VITA).<br>Probes / Tips:The respective tips / probes for the standard modes asked in the tender must be included for as per applications. The special tips if any needed for our applications should be quoted. | | | | | | |
| | | Intelligent lift mode for EFM and MFM. In the Lift mode technique the sample's topography should be determined on a continuous first pass over a scan line. The data are stored and a second parameter, such as magnetic field, should be determined by an amplitude or phase shift of the cantilever vibration on a second pass of the same scan line. This should get accomplished by lifting the probe a set, but short (e.g., 50nm) distance above the surface. To guarantee correct lift-mode imaging, it has to be possible to use closed-loop z to achieve the desired lift height. Then, while using the stored data from the first pass scan, the exact topographical changes along the scan | | | | | | |



**Signature of Contractor with Stamp**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | line are tracked while monitoring and storing the cantilever's interactions with magnetic forces emanating from the sample's surface. The MFM and topography images should get displayed simultaneously in real-time as acquired line-by-line. Other methods, e.g. which simply skim the tip some height above the sample without regard to topography are not acceptable. | | | | | | |
| | | able to perform all of the above SPM modes without changing and removing scan head. | | | | | | |
| | | Conductive AFM must have with user-selectable gain range of 103 - 1011 Volts/A and typical noise of 250 fA at highest gain range. Change in gain stage does NOT require change of probe holder. | | | | | | |
| | | Must offer dark lift mode for conductive AFM, ambient; 60 ºC sample heater. | | | | | | |
| | | Microscope Stage Requirements | | | | | | |
| | | (1) The AFM system should accept samples with sizes up to 40 mm x 40 mm or more and 16 mm thick or more. (2) Also, it must have motorized Z-stage with software-controlled pitch and tilt corrections. | | | | | | |
| | | Vibration Isolation and Environment Control Requirements | | | | | | |
| | | System has to be delivered with a passive vibration isolation table as well as with a protective cover to decrease air flow across the scan area. | | | | | | |
| | | Ease of Use | | | | | | |
| | | Must offer pre-mounted and pre-aligned cantilevers, mechanic clip for probe mounting, kinematic mount for mounting probe cartridges, Must be able to change cantilevers or samples without removing scan head. | | | | | | |
| | | Control Electronics Requirements | | | | | | |



**Signature of Contractor with Stamp**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | The AFM system must have state-of-the-art controller and related electronics. The controller should have:<br>(1) 20-bit digital-to-analog converters for scan control in X, Y and Z<br>(2) Ultra-low noise high voltage amplifier (say around, <0.1% or better)<br>(3) Two independent software controlled lock-in amplifiers with separate amplitude and phase outputs<br>(4) Should include 8 dedicated 100 kHz 16-bit A/D converters<br>(5) Completely automatic engage under software control<br>(6) With minimum Sampling Rate should be of 100 kHz or more | | | | | | |
| | | Workstation Computer Requirements | | | | | | |
| | | Windows-7 Base High performance AFM and Video graphics board with Dual PC Monitor Support | | | | | | |
| | | Data Acquisition Software Requirements | | | | | | |
| | | Can display at least 16 imaging windows, Real-Time Software with a on-the-fly parameter update (i.e., during image acquisition) including feedback gain, drive amplitude, scan rate, setpoint, lock-in filter, lock-in gain scan size, pixels, offset. Must have generalized multi-channel spectroscopy capability<br>Must have generalized multi-meter signal display capability, intelligent LiftMode for MFM and EFM, probe-positioning routine with linking capability to I/V and force curves, Needs capability to overlay the amplitude & phase signal in Auto-Tune. | | | | | | |
| | | Others | | | | | | |
| | | Online Imported UPS for AFM backup according to the AFM load, with minimum 1 year warranty also | | | | | | |
| | | Installation of AFM along with adequate voltage stabilizer and surge protection | | | | | | |
| | | List of AFMs installed in Pakistan clearly mentioning models, current functioning status and location | | | | | | |
| | | 1xTraining at Manufacturers location (Foreign) | | | | | | |
| | | (1)The installation and commissioning | | | | | | |



**Signature of Contractor with Stamp**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | of the complete system should be carried out by experienced factory trained engineers at our site.<br>(2) The respective training to the deputed personnel should be given for required number of days. | | | | | | |
| | | All requisite licensed software's for high resolution imaging and sample topography along with computing support. | | | | | | |

**Prices should be quoted inclusive of all freight charges.**

COMSATS Institute of Information Technology, Lahore
TENDER ISSUANCE
Date:----------



**Signature of Contractor with Stamp**