

**INTERNATIONAL AND INTER UNIVERSITY
CENTER FOR NANOSCIENCE AND
NANOTECHNOLOGY
MAHATMA GANDHI UNIVERSITY
PRIYADARSHINI HILLS P.O, KOTTAYAM-PIN
686560**

SHORT TENDER NOTICE (TWO BID SYSTEM)

TENDER NOTICE No: 3/TEND/IUCNN/2016-17 Date: 10.03.2017

Competitive tender in sealed cover for supply of **High Performance Computing (HPC), Ion Selective columns and Simulation Software, 500mm focal length spectrometer, Smart class room settings** are invited from reputed firms and authorized dealers so as to reach the office of the under signed not later than **3 pm on 22.03.2017**. Tenders will be opened on the next working day at 11:00 am in the presence of tenderers or their authorized representatives. The technical bid will be opened first followed by the financial bid.

Sl.	Detail	Tender Cost	Time for Supply
01	High Performance Computing and Simulation Software	INR 1000	1 month
02	Ion Selective column for water purification	INR 1000	1 month
03	Animation (Statistical, Biological, Chemical Software for nanomaterial characterization)	INR 500	1 month

DETAILED SPECIFICATION

High Performance Computing and Simulation Softwares	<p>High Performance Computer Server that can be used for Discrete Fourier Transform Simulations [DFT], Monte Carlo Simulation and Genomic Sequencing with necessary optional modifications.</p> <p>Processor : Intel Xeon E3-1200 v5 or latest with Intel C236 CHIPSET or latest</p> <p>Memory Architecture: 2133MT/s DDR4 DIMMs, Memory type: UDIMMs : Minimum 32Gb with 4 DDR4 DIMMs or higher required.</p> <p>Hypervisor support :Microsoft Windows Server with Hyper-V, VMware vSphere ESXi.</p> <p>High Performance Primary Storage Disk : With read speeds greater than 500MB/s and write speeds greater than 500MB/s, Optimized for multi-core multitasking. Data Read/Write Controlled with High Performance Algorithm. Terra byte storage.</p> <p>High Performance BIOS Settings</p> <p>High Performance operating system with all basic drivers and remote control desktop.</p> <p>Additional Softwares required: High level mathematical function simulation with Monte Carlo simulation, functional modules for analysis, Forecasting, operations analysis, etc</p> <p>Distributed mode Monte Carlo simulation needed to run in parallel on multiple cores.</p> <p>DFT and FFT functions (including z-domain frequency response, spectrum and cepstrum analysis) incorporating FFT in multimode.</p>
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	<p>Must have Financial, Optimization, Statistics & Machine Learning Toolbox for Monte Carlo and DFT Simulations</p>
<p>Ion Selective column for water purification</p>	<p>Ion Selective column Ammonia, Nitrate, Chloride High precision Combination ion selective columns (ISE) for the determination of ammonia (NH₃) in solution. *Detection from 0.02 to 17,000 mg/L NH₃ Replaceable PTFE Membranes Temperature Range 0 to 40 °C Approximate Slope -56 mV Cable coaxial; 1 m (3.3')/Network Connection BNC, OPTICAL or RJ-45 which should be coupled to our application module and HPC Systems and associated modules. Double-junction combination ion-selective column. Durable epoxy body and are well-suited for portable field applications. Outer reference chamber is silver-free and must resist contamination. These columns are refillable. Resolution Minimum of 0.1 mV</p>
<p>Animation (Statistical, Biological, Chemical Software for nanomaterial characterization)</p>	<p>Complete toolset for 3D imaging of nanomaterials. Process flow Sequencing. Reconstruction to visualization must be provided with all necessary tools for tomographic data analysis. cross-platform application, large volumetric datasets has to be rendered, animated, sliced, and analyzed. The platform must provide a robust graphical interface where multiple datasets, color maps, and other visualization settings to be used in combination and these objects can be saved as image or animated video files. Data collected can be further analyzed through histograms, multicorrelative statistics, multiple filters, and user-customized scripts. Tomographic reconstructions of experimental data must also be possible. All tools are to be installed in our High Performance Computer (HPC)</p>
<p>SPECTROMETER</p>	<p style="text-align: center;"><u>SPECTROGRAPH FOR EXISTING ANDOR NEO DETECTOR</u></p> <p><u>SPECTROGRAPH:</u></p> <p>Offering spectrograph should be compatible with our existing ANDOR Neo camera. Same one software should control our existing ANDOR Neo detector and offering spectrograph and other related accessories.</p> <ol style="list-style-type: none"> 1. Focal length: 500mm or better 2. Minimum Aperture: F/6.5 3. Magnification (Vertical @ centre of CCD): 1 4. Interchangeable triple grating turret could accommodate two gratings and one mirror simultaneously. 5. Size of drive step: 0.002 to 0.005nm 6. Focal plane size (mm, W x H): 28 ± 2 x 14 ± 2 7. Stray light: FVB (1 nm from laser): 1.1 x 10E-4 8. Wavelength accuracy @ Center: 0.04 nm 9. Wavelength repeatability: 10 pm 10. Wavelength side accuracy: 0.05 nm 11. Resolution: at least 0.05 nm with 10um slit and 1200 l/mm grating 12. Should have scanning ability for the single point detector 13. Communication: USB 2.0 or faster <p><u>INPUT/ OUTPUT PORT CONFIGURATION:</u></p> <ol style="list-style-type: none"> 1. Two motorised input slits 2. Input Port 1: Slit widths range should be continuously variable from 10 µm to 2.5 mm 3. Input port 2: Entrance port slit should have to open from 10um to 15mm for imaging purpose. 4. Selection of both slits should be software controllable

	<p>5. One motorised output slit and one CCD camera output port</p> <p><u>GRATING AND OPTICS</u></p> <ol style="list-style-type: none"> 1. Grating 1: 600 l/mm with 500nm blaze grating 2. Grating 2: 1800 l/mm with 500nm blaze grating 3. Grating 3: Flat mirror with Al+MgF2 protection <p><u>SOFTWARE AND PC INTERFACE</u></p> <ol style="list-style-type: none"> 1. Software should be compatible for imaging and spectroscopy applications 2. One same software should control our existing ANDORNEO detector, offering Spectrograph, Grating rotation and selection of input ports. 3. One entrance port slit should have to open from 10um to 15mm for imaging and spectroscopy research application by the same software. <p>OTHER OPTICS AND ACCESSORIES:</p> <ol style="list-style-type: none"> 1. Fiber optics: Single core 100um inner diameter for wave band VIS/NIR with SMA to SMA termination 2. SMA adapter and necessary accessories to connect fiber optics to spectrograph slit. <p>OTHER TERMS:</p> <ol style="list-style-type: none"> 1. Warranty: One year onsite warranty for full system. 2. Service credentials: The supplier should have at least five similar installation in India. Customer list is mandatory to prove your credential. 3. Suppler should attach a compliance statement and should specify if any deviation. Compliance and deviation statement is mandatory.
Smart Class Room	<p>Smart Class room Chairs = nos. 45 Executive black color chair with leather finishing Working Table for the smart room 24mm laminated board as per the drawing layout materials should be band ed from green ply.</p>

NOTE: (1) PLEASE SEE THE ANNEXURES I, ANNEXURE II AND ANNEXURE III ATTACHED BELOW
(2) ALL THE DOCUMENTS RELATED TO THE TENDER CAN BE DOWNLOADED FROM THE UNIVERSITY WEBSITE- www.mgu.ac.in in the section "Quotation/tenders"

ANNEXURE I

General Terms and Conditions

1. The main envelop should be super scribed: "Supply of – "Item Quoted For" ”.
2. The non refundable application fee must be accompanied with tender.
3. Tenders must accompany a copy of the "General Terms and Conditions, Annexure I and Annexure II and III" section of this document, signed and stamped on each page indicating that they agree to these.
4. Last date of submission of tender along with requisite fee, EMD and all documents is **10.03.2017**. The DD for application fee, EMD or any other must be drawn in of favor of **DIRECTOR , IIUCNN, M. G. University, Kottayam, Kerala** payable at **SBT Mahatma Gandhi University Campus Branch**.
5. All other charges including VAT/CST, Excise Duty and other levies payable by C.I.P should be clearly indicated, otherwise it will be presumed that the rates quoted are inclusive of all these charges and will not be paid.
6. The Excise Duty component (with percentage) should be indicated, as the University is exempted from the payment of Custom/Excise Duty. Exemption will be availed by providing Custom/Excise Duty Exemption Certificate with order.
7. The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid. The charges for extended warranty and/or Annual Maintenance Contract after the expiry of offered warranty period should also be specified in the financial bid.
8. The manufacturers' printed literature/catalogue/drawing/user's list in respect of range of product being quoted should also be submitted with the offer.
9. Our Institute is registered with the Department of Scientific & Industrial Research (DSIR), so Excise duty exemption will be provided.
10. Final decision for tender solemnly depends on the brand of the equipment, technical specification of the equipment and warranty provided. Minimum 1 Yr Warranty & branded item to be provided.

Other requirements for delivery and complete installation

1. Delivery is at IIUCNN, Mahatma Gandhi University, Kottayam
2. The proposals shall be submitted in two parts, viz. **Technical bid and Financial bid in two separate sealed envelopes** (with respective marking superscribed in bold).
3. All other requirements for satisfactory installation of this equipment should be provided.
- 4 It will be the responsibility of the supplier to deliver the ordered materials at IIUCNN, Mahatma Gandhi University, Kottayam.
5. All required materials for satisfactory installation are to be provided by the supplier at their own cost.

Special Condition: The supplier company should have facility of after sales service and support in Kottayam, Kerala.

**ANNEXURE II:
TENDER FORM PART-I (TECHNICAL BID)**

PART-I (TECHNICAL BID) OF TENDER NO:

Last date for receipt:

Due date for opening Part -I (TECHNICAL BID):

Tenderer's Offer No:

Date:

From,

M/s.

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To,

DIRECTOR IIUCNN

Mahatma Gandhi University,

P.D Hills P.O, Kottayam- 686 560, Kerala,

India.

Dear Sir,

I/We have gone through the tendering conditions pertaining to the Tender and General Terms and Conditions of Contract and other requirement for delivery and complete Installation and Special Conditions of Contract contained herein with this tender document. I/we hereby agree to supply the stores conforming to the tender specifications incorporated in ANNEXURE I of the tender document and also agree to abide by your General Conditions of all Contracts and Special Conditions of Contract contained in the ANNEXURE I of the Tender document.

You will be at liberty to accept any or more of the items of stores offered by us and I/we shall be bound to supply you the stores as may be specified in the Purchase Order/Contract.

I/We hereby agree to keep the price valid for your acceptance for a period of 30 days from the date of opening of Part-II (Financial bid) of the tender

Deviations to Technical specifications contained in ANNEXURE I of the tender documents are detailed in ANNEXURE-A to the tender form while deviations proposed to the General Special Conditions of Contract contained in ANNEXURE I are detailed in Annexure-B to this tender. Price applicable for the stores are indicated separately in a sealed envelope marked as financial bid of the tender.

I/We are also enclosing herewith all the leaflets catalogue etc. pertaining to the stores offered.

Yours faithfully

Stamp and Signature of the Tenderer

ANNEXURE III: TENDER FORM PART-II (FINANCIAL BID)

PART-II (FINANCIAL BID) OF TENDER NO:

Last date for receipt:

Due date for opening Part -II (FINANCIAL BID):

Tenderer's Offer No:

Date:

From,

M/s.
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To,

DIRECTOR IIUCNN

Mahatma Gandhi University,

Priyadarshini Hills P.O, Kottayam- 686 560,

Kerala, India.

Dear Sir,

In response to your invitation and as per your tendering and contracting conditions, the prices applicable for the scope of supply contained in ANNEXURE-I (TECHNICAL BID) of our tender are indicated in the format at annexure "A" to this tender.

We hereby agree to keep the price valid for your acceptance for a period of 30 days from the date of actual opening of Part-II (FINANCIAL BID) of the tender.

Yours faithfully,

Stamp and Signature of the Tenderer