



MAHATMA GANDHI UNIVERSITY

MGU/DST-SAIF/2018-19/01

10/07/2018

NOTICE INVITING TENDER

The Coordinator, DST-SAIF, C/o School of Environmental Sciences, Mahatma Gandhi University invites online bid (technical and financial bid) for supply and installation of the Scientific Equipment *Field Emmision Scanning Electron Microscope(FESEM)* from reputed firms

1	Name of the scientific equipment	<i>Field Emmision Scanning Electron Microscope(FESEM)</i>
2	Earnest money deposit (EMD)	Rs. 2,80,000/-
3	Tender submission fee	Rs. 2,500/-
4	Period of supply and installation	Within 90 days from the L/C opening date
5	Mode of submission of Bid	Online
6	Tender Documents	Can be downloaded from the website www.etenders.kerala.gov.in
7	Last date and Time of submission of tender by online	25/07/2018, 4.00 pm
8	Last date and Time of submission of relevant documents by speed post	27/07/2018, 12.00 pm
9	Date and time of opening of technical bid	27/07/2018, 2.00 pm

General tender documents and tender schedule can be downloaded in A₄ plain size paper free of cost from the website www.etenders.kerala.gov.in. Duly filled up and signed tender schedule along with relevant documents should also be sent to “**The Coordinator, DST-SAIF, C/o School of Environmental Sciences, Mahatma Gandhi University, Kottayam, Kerala Pin-686560**”, by speed post so as to reach before the date and time specified. The cover containing the documents should super scribe the name of the scientific equipment, tender number, and last date of submission of tender.

Documents to be submitted along with bid through online/speed post

Sl.No	Through online	Through speed post
1	Scanned copy of valid registration certificate/dealership certificate	Copy of valid registration certificate attested by a gazette officer/ dealership certificate
2	Scanned copy of duly filled e-payment form	Duly filled e-payment requisition.
3	Scanned copy of other certificates required, if any, for tender acceptance	Copy of other certificates required, if any, for tender acceptance.
4	Scanned Copy of duly filled preliminary Agreement in stamp paper of Rs.200/-	Preliminary Agreement in original
5	BOQ	Not Required

Technical Specification Field Emmision Scanning Electron Microscope(FESEM)

<i>Electron Source</i>	Schottky Thermal Field Emitter (The emitter should be covered under warranty at least for three years or free emitters should be provided for 3 years)
<i>Resolution</i>	better than 0.8 nm at accelerating voltage of 15 kV and 1.0 nm at accelerating voltage of 1 kV (At least in single edge method or better)
<i>Magnification</i>	x25 to x 10,00,000 times or better
<i>Accelerating Voltage</i>	0.1 kV to 30 kV or better
<i>Probe Current</i>	atleast 200nA or more
<i>Scan speed</i>	50 ns/pixel or better
<i>Image Framestore</i>	10k x 10k pixels or above
<i>Specimen stage movement</i>	X (mm) :110 mm or better Y (mm) :80 mm or better Z (mm) :1 mm to 30 mm or better Tilt (°): -3° to 70° Rotation (°): 360° endless, motor driven

<i>Vacuum System</i>	The vacuum system should be completely oil free comprise an SIP, TMP and an Scrool pump
<i>Microanalysis (EDS)</i>	A microanalytical system, computer and software should be attached to the microscope for energy dispersive microanalysis. It should detect all elements from Boron to Uranium and must have a detector resolution of at least $Mn\alpha$ 129 eV with 30 mm ² detector or more. Must be an LN2 free system using vibration free thermoelectric Peltier cooling technology. Should be capable of qualitative, quantitative and mapping analysis
<i>Safety Features</i>	Protection features against vacuum, water and power must be provided
<i>Operating modes</i>	Chamber secondary electrons (SE), back-scattered electrons (BSE), In Lens secondary electrons (SE), back-scattered electrons (BSE). Simultaneous imaging of in lens SE & BSE should be possible
<i>Detector</i>	An off-axis dynode photomultiplier/Electron Multiplier detector
<i>Accessories</i>	Should be supply all necessary accessories
<i>Computer and Operating system</i>	Computer and Operating system should capable of smooth operation of instrument and data processing.
<i>Workstation Software</i>	Software should be user friendly and should ensure seamless work flow for FE SEM System. It must be 21 CFR Part 11 compliance should be offered. Workstation must be able to control the FE SEM, acquire, store, process and reproduce the data by the same computer.
Tool kit	Tool kit for emitter replacement as a standard supply.
UPS and others	A branded UPS System with built in Isomer Transformer, SMF Batteries, of appropriate capacity (minimum 10 KVA) and input/output phases as per requirement of the FESEM System and vacuum control.
Installation and Demonstration	IQ/OQ/PQ to be performed as per OEM protocol, should be done free of cost with necessary traceable standards along with necessary performance kit standard solutions. Documents, Kits & standards etc., as required to be supplied along with the instrument. Demonstration and Training on system to our Lab personal at site to be incorporated, responsibility of the supplier for training of the lab personnel at supplier site/installation site. Basic training for a period of one week after installation & commissioning of the equipment to technical personnel to be provided at our site.

Expertise	Vendor should have the experience of minimum 10 FESEM installations in India
After Sales Service	Should have a good after sales service/technical support capable of reaching at short notice the places where FESEM is proposed to be installed, Visits and unlimited breakdown calls by service/application support, engineers should attend immediately without fail. Troubleshooting training (Instrumentation/Application) as and when required free of cost. Vendor should have demo lab with a same model or better and provide sample analysis free of cost during instrument failure under warranty period.
Warranty	Three Years Comprehensive warranty (Inclusive of Spares and Consumables) for the complete FE SEM System, Electron Gun, other accessories& UPS including battery should be offered. AMC for 2 Years after the 3 years comprehensive warranty should be provided free of cost
Method development & Project execution service	Should quote application method development and project execution services for 3 years.

Special Conditions

1. Instrument should be supplied with necessary manuals or Quotation should include the detailed description of each module with circuit diagram.
2. Laboratory floor space, electrical power requirements, earthing, room temperature/humidity requirements etc. should be mentioned appropriately.
3. Complete set of service and operation manuals for diagnosis, trouble shooting, maintenance and electronic circuitry (hard and soft copies).
4. The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid. The bids shall be opened at the date and time specified. Further details can be had from the office on the undersigned on all working days during working hours. The bidders are advised to submit their bid well in advance to avoid any kind of network issues. If relevant documents through speed post are not submitted with in time, the tenders will not be considered. The undersigned reserves the right to reject any or all the tender without assigning any reason whatsoever.

Sd/-
Coordinator