Phone: 0427-2345766
Fax: 0427-2345124

PERIYAR UNIVERSITY

Reaccredited with 'A' Grade by the NAAC

PERIYAR PALKALAI NAGAR

SALEM – 636 011

TENDER NOTICE

No. PU/R/PL&D2/RUSA/Equipment purchase-5/2017 **Date: 21.11.2017**

Sealed tenders will be received by the Registrar, Periyar University, Periyar Palkalai Nagar, Salem – 11 upto 11.00 A.M. on **26.12.2017** for the **Purchase of Scanning Electron Microscope (SEM) with Energy Dispersive X-ray Spectrometer (EDS) for RUSA grant Fund in the Periyar University** from reputed firms. The intended tenderers should show their credentials and get concurrence of the Registrar before purchase of tender schedules. Tender schedules can be had from the undersigned from **29.11.2017** to **25.12.2017** between 11.00 A.M and 4.00 P.M on payment of demand draft drawn in any nationalized bank in favour of the Registrar, Periyar University, payable at Salem as detailed below. Tender should reach this office on or before 11.00 A.M. on **26.12.2017.**

Tenders to be opened on **26.12.2017** at 12.00 noon in our office

The EMD in the form of demand draft should be drawn in any Nationalised bank in favour of the Registrar, Periyar University, payable at Salem.

Sl.No	Description	Qty.	Cost of tender documents (Including GST 18%)	EMD Rs	Time of completion of supply
1.	Scanning Electron Microscope (SEM) with Energy Dispersive X-ray Spectrometer (EDS)	01	Rs. 17,700/- (Cost-Rs. 15,000/- + GST 2,700/-)	EMD at 1% of the Instrument Value	10 days

(Specifications are Overleaf)

REGISTRAR

Scanning Electron Microscope (SEM) with Energy Dispersive X-ray Spectrometer (EDS)

Technical Specifications

Sl. No.	Description	Specifications
1	Source	Tungsten electron source, Factory pre-centered filaments
2	Resolution in high vacuum	3 nm at 30 kV or better
3	Resolution in low vacuum	4 nm at 30 kV or better
4	Probe Current	At least 1pA to 1uA
5	Acceleration voltage	0.5 - 30 kV, adjustable or better
6	Magnification	5x to 300,000x or more, continuously variable
7	Specimen stage	Computer controlled eucentric/compucentric stage with 3 axes or more motorized movements. X = 80 mm or better, Y = 40 mm or better, Z = 45 mm or better. Specimen tilt: -10 to 80^0 or better, Rotation: 360^0. The position of the stage has to be graphically displayed on the monitor for sample positions.
8	Specimen size	80 mm diameter or more
9	Detectors	Imaging with Secondary electron (SE) and Back scattered electron (BSE) with required resolution mentioned above. IR-CCD camera for chamber view.
10	Non-conductive samples	Should have low vacuum facility for imaging non- conductive samples.
11	Vacuum mode	Menu selectable, switching between high and low vacuum without involving any mechanical / electronic alignments. The column vacuum should be separated from chamber vacuum.
12	Pressure Range in low vacuum mode	10-100 Pa or better
13	Image display mode	19 inch LCD/TFT monitor, live images of different detector to be viewed simultaneously, full image live display, split live image, built in digital zoom, built in magnification, Pseudo color, Histogram display, Digital images should have resolution better than 2000 X 2000 pixels and should be saved as BMP, TIFF or JPEG format.
14	Computer	Compatible computer with latest configuration and Windows operating system.

15	Software	Should have the capability for performing 3D data analysis. Software should be capable to do measurement of data. Auto contrast, auto focus, auto stigma, auto gun alignment and biasing, maintenance videos, click center zoom, frame step move, saving position coordinate and seamless auto bias.
16	Other requirements	Safety measures against vacuum and power. Suitable anti-vibration platform, tool kit, spares filaments for two years (approx. 25 hrs per week). Calibration of magnification, dimension and resolution. Support kit/tool for specimen handling, stage and sample mounting stubs (including 45/90 degree SEM mount -4 nos.), stub holder.
17	Sputter Coater	Sputter coater with gold and carbon targets, oil free
18	Energy dispersive X-ray detector (EDS)	EDS should have a minimum area of 10 mm. It should be liquid nitrogen free EDS. Elemental detection from Boron to Uranium. Resolution at least 129 eV. Should be capable of qualitative, quantitative and mapping analysis. Software: Automatic peak labeling, qualitative and quantitative analysis, elemental mapping, selective area analysis and multipoint analysis. Suitable elemental standard. Standard and standard less techniques should be possible. Customizable report generation.
19	Power Requirements	As per Indian Electrical Standards
20	Warranty	One year warranty and two years AMC.
21	UPS/AC	Suitable online UPS for un-interrupted data collection of up to one hour. 2 Ton A/C – 1 No
In addition, details regarding the List of Users, User manuals, Installation and training module should be attached with quote.		

Brand Names

1. Hitachi/JEOL/ZEISS/Philips Or Equivalent