# **NETAJI NAGAR COLLEGE FOR WOMEN**

170/13/1 Netaji Subhas Chandra Bose Road, Regent Estate, Kolkata-700092

Ref. No. NNCW/DST-SERB-EEQ/ 5

Date: 24/05/2022

# **Tender/Quotation Notice**

# Subject: Notification Inviting Quotations for Procurement of the Equipment

### **Descriptions:**

Equipment name	Descriptions/Specifications	Warranty/Remark
1.Cyclic	<b>Specification of Potentiostat and Galvanostat:</b>	One or Three yea
	Potentiostat:	standard warranty
Voltammetry	Linear Sweep Voltammetry	
(CV)	Cyclic Voltammetry	OEM Should have
	Chronoamperometry	their own service
(Potentiostat/	Pulsed Voltammetry (SCP, NPV, DPV &SWV)	center in India and
Galvanostat)	OCP Measurement	NABL accredited
	Tafel Analysis	calibration
	Linear Polarization	laboratory for
	FRA Analysis	after sales support
		in India.
	Galvanostat:	
	Linear Sweep Voltammetry(Galvanostatic)	
	Cyclic Voltammetry(Galvanostatic)	
	Chronopotentiometry	
	Charge-Discharge	
	Potentiostat:	
	Applied Voltage Range: -10V to +10V	
	Compliance Voltage: Upto +-15V	
	Applied Potential Resolution: Upto 150μV	
	Applied Potential Accuracy: Within 0.05% of voltage scale	
	Scan Rate:1 μV/s to 1000mV/s	
	Maximum Current:±1A (Continuous)	
	Current Ranges: 8 Ranges (100 nA, 1 μA, 10 μA, 100μA,	
	1 mA, 10 mA & 100 mA &1A)	
	Current Resolution:1 nA (at 100 nA Current Range)	

#### **Galvanostat:**

Applied Current Range: Upto ±1A (Continuous) Applied Current Resolution: Upto 15nA

Applied Current Accuracy: Within 0.1% of current scale

Scan Rate: 1 µA/s to 1000µA/s Maximum Current: ±1A (Continuous)

Current Resolution: 1 nA (at 100 nA Current Range)

#### Features:

-10 V to +10 V voltage range Voltage Resolution upto 75 μV Compliance Voltage upto +-12V Variable current range selection upto 1A Variable scan rate selection from 1 µV/s to 1000 mV/s Current resolution upto 100 pA

#### **Operating Software:**

The Software provided with the Potentiostat /Galvanostat is comprehensive, fully windows based with three-dimensional view of graphics and analysis software.

Software records current, voltage and time for cyclic and linear sweep voltammetric measurement. It is possible to record current, voltage and time data in tabular format for each measuring point in voltammogram.

The experimental data is exportable in ASCII or other formats compatible for analysis by any other software. Software is capable of supporting a wide variety of electrochemical techniques as mentioned below: Linear Sweep voltammetry, Cyclic voltammetry, Chronomaperometry, Pulsed Voltamtery (SCP, NPV, DPV, SWV), OCP measurement, Tafel Analysis, Linear Polarization

### **Set Of Accessories:**

- 1. Electrochemical cell with stand
- 2. Ag/Agcl reference electrode(B14 Type)
- 3. Platinum wire working electrode(B14 type)
- 4. Platinum Mesh Counter electrode(B14 Type)

# 2.Digital Multimeter (with Scanning)

# 61/2-digit BENCH/SYSTEM DIGITAL MULTIMETER WITH SCANNING **Features and Specifications:**

- 61/2-digitDMM ore measurement capability including transient capture, data visualization, and analysis.
- Touchscreen display to simplify setup, monitoring, and data analysis
- 15 built-in measurement functions, including digitizing, capacitance, and temperature. Make low current and low resistance measurements on low-power devices.
- Display plots of waveforms including overlays of one waveform over another.
- Making measurements as short as 0.0005 power line cycles

## Three-year standard warranty

**OEM Should have** their own service center in India and NABL accredited calibration laboratory after sales support in India.

<ul> <li>or 8.3 μs (10 μs) for 60 Hz (50 Hz) power lines.</li> <li>Use on-instrument, intelligent, command and control processing to reduce PC communication for reduced test time.</li> <li>Standard LAN LXI and USB plus optional GPIB, RS-232, and TSP-Link® interfaces</li> <li>Two-slot, 80-channel capacity</li> <li>DMM for precision measurement</li> <li>Voltage: 100 nV to 1000 V with 0.0025% basic DCV accuracy</li> <li>Current: 10 pA to 3A</li> <li>Resistance: 1 μΩ to 120 MΩ</li> <li>Capacitance: 0.1 pF to 100 μF</li> <li>1 M sample/s, 16-bit digitizer with 7 million readings storage</li> <li>Frequency: Max Frequency 300 KHz upto 750V</li> <li>Digitizing: 16 bits, 1MS/s Digitizer</li> <li>Diode &amp; Continuity testing should be available</li> <li>Remote Interfaces: USB Host and Device, LAN</li> <li>Temperature measurement with thermocouples, resistance temperature detectors, and thermistors from -200°C to 1820°C</li> <li>Accessories/attachments:</li> <li>Software, Leads, Power cords and High accuracy probe.</li> <li>Attachment for measuring or inspect Voltage changing with time i.e. time dependent voltage measurement Accessories.(V<sub>rms</sub> ~ 300 Volt and high frequency)</li> </ul>	
<ul> <li>Processor Brand: Intel</li> <li>Processor Name: Core i5</li> <li>Processor Generation: 11th Gen</li> <li>SSD: Yes, Capacity: 512 GB/1 TB</li> <li>RAM: At least 8 GB or 16 GB</li> <li>Operating System: Windows 11 Home 64-bit</li> <li>Mic, USB Port, HDMI Port: YES</li> <li>Size: 10.6/12.6/13.3/14 inch (Preferably small size)</li> <li>Light weight (~ 1kg), slim and ultra-thin</li> <li>MS Office Provided: Yes</li> <li>Anti-virus included (minimum three years)</li> </ul> Accessories: External DVD Writer, USB Mouse and Keyboard	1 Year Standard Warranty (ITW)
	<ul> <li>Use on-instrument, intelligent, command and control processing to reduce PC communication for reduced test time.</li> <li>Standard LAN LXI and USB plus optional GPIB, RS-232, and TSP-Link® interfaces</li> <li>Two-slot, 80-channel capacity</li> <li>DMM for precision measurement</li> <li>Voltage: 100 nV to 1000 V with 0.0025% basic DCV accuracy</li> <li>Current: 10 pA to 3A</li> <li>Resistance: 1 μΩ to 120 MΩ</li> <li>Capacitance: 0.1 pF to 100 μF</li> <li>1 M sample/s, 16-bit digitizer with 7 million readings storage</li> <li>Frequency: Max Frequency 300 KHz upto 750V</li> <li>Digitizing: 16 bits, 1MS/s Digitizer</li> <li>Diode &amp; Continuity testing should be available</li> <li>Remote Interfaces: USB Host and Device, LAN</li> <li>Temperature measurement with thermocouples, resistance temperature detectors, and thermistors from 200°C to 1820°C</li> <li>Accessories/attachments:</li> <li>Software, Leads, Power cords and High accuracy probe.</li> <li>Attachment for measuring or inspect Voltage changing with time i.e. time dependent voltage measurement Accessories.(V<sub>rms</sub> ~ 300 Volt and high frequency)</li> <li>Features</li> <li>Processor Brand: Intel</li> <li>Processor Generation: 11th Gen</li> <li>SSD: Yes, Capacity: 512 GB/1 TB</li> <li>RAM: At least 8 GB or 16 GB</li> <li>Operating System: Windows 11 Home 64-bit</li> <li>Mic, USB Port, HDMI Port: YES</li> <li>Size: 10.6/12.6/13.3/14 inch (Preferably small size)</li> <li>Light weight (~ 1kg), slim and ultra-thin</li> <li>MS Office Provided: Yes</li> <li>Anti-virus included (minimum three years)</li> </ul>

Last Date of submission of the quotation: 10/06/2022 (at 3.00 pm)

## Note:

1. Authority has the right to cancel any notification inviting quotations for procurement of the equipment under unavoidable circumstances.

- 2. Authority/the Principal Investigator of this project have the right to reject any quotation if it failsto fulfil general norms.
- 3. The authority reserves the right to accept/reject any quotation without showing any reason thereof.
- 4. The payment will be done after successful installation of instrument.

5. The decisions of the Authority will be final in this regards.

Bradip Thabur Dr. Pradip Thakur (PI)

Dr. Pradip Thakur Principal Investigator DST-SERB Project Netaji Nagar College for Women Kolkata - 700 092

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