Technical specifications for Rotating Ring-Disk Electrode (RRDE) with computer controlled Bi-Potentiostat
(The Bidder should Quote for both the items together)

Required mandatory specifications
(all the conditions should be met)

The system should have a bi-potentiostat capable of being used as potentiostat/galvanostat, in bipot mode, with provisions to run both DC and AC methods with the following specifications:

BI - POTENTIOSTAT

S. No.	Parameter	Description
1	Maximum Compliance voltage	± 17 V or above
2	Maximum Output Current	± 1 A
3	Output Voltage Range	± 10 V or higher
4	Current Ranges	smallest current range ± 100 nA to current range ±1 A (8 ranges)
5	Measured current resolution	< 4 pA on 100 nA full scale range
6	CV scan rate	10 μv/s (min) – 125 μv/s (max)
7	Input bias current	< 10 pA or better
8	Input Impedance of electrometer	>100 GΩ at 10 pF
9	EIS option/module	Potentiostatic & galvanostatic control
10	Frequency range	10 μHz to 1 MHz (Should be capable of performing EIS measurements with potentiostatic and galvanostatic control, over complete frequency range of 10 μHz to 1 MHz)

ROTATING RING DISK ELECTRODE

S. No.	Parameter	Description
1	Rotation speed	Upto 8000 rpm or more with a resolution of 1 rpm accurate to within ± 1 % at higher values.
2	Display	Four- digit display
3	Rate control	10 turn-rotation rate control, toggle with LED indicators, external rate control via input signal on external I/O port with start/stop option
4	Motor power	11 W or above
5	Control method	Closed loop servo system
6	Max. Continuous Torque	18.7 milliNewton- meters or better
7	Description of accessories	Platinum ring (15mm OD PEEK shroud), Glassy carbon disk electrode (5.0 mm OD), Disk Ejection and Polishing tool kit with 0.05 μm alumina solution, Standard Platinum Counter Electrode kit, Standard Ag/AgCl Reference Electrode, Jacketed glass cell for rotating electrodes, Gas-purged Bearing assembly.

The bi-potentiostat should include a Rotating Ring Disc Electrode (RRDE) setup with the following specifications.

Electrochemical software:

The software should support following basic electrochemical measurements: Open circuit potential, bulk electrocatalysis, Cyclic Voltammetry, Linear Sweep Voltammetry, Differential Pulse Voltammetry, Square Wave Voltammetry. Electrochemical methods like Chrono-Amperometry, double potential step chronoamperometry, Chrono-Coulometry & Chrono-Potentiometry, anodic stripping voltametry etc.

EIS Data presentation: Nyquist, Bode, Admittance, Dielectric, Mott-Schottky, rotating disc electrochemical impedance spectroscopy, rotating disc Galvanostatic electrochemical impedance spectroscopy, Impedance Uncompensated resistance. Data analysis: Fit and Simulation as well as Real-time Lissajous plot generation with other possibilities like Find circle, Element subtraction, Kramers-Kronig etc

Terms and conditions:

- A compliance statement must be provided clearly mentioning if the proposed technical specifications are matched and any additional features that the company may offer may be clearly indicated.

- Warranty of at least one year must be provided.

- Details on annual maintenance contract upon installation may be provided.

- Installation, calibration and onsite training for the equipment are mandatory.

- Presence of technical personnel and services in Chennai is desirable.

- Spares and consumables should be provided.

- Calibration samples must be provided, if necessary.

- Details regarding installation in India during the past three years specifically to central funded technical institutions, government national laboratories should be provided. Certification from cutomers from the aforementioned institutions and laboratories .

- Necessary optional spares should be quoted separately.

- CIP Chennai quote must be indicated.

The firms are also required to submit/upload copies of the following documents along with the bid

- Copy of PAN card in the name of firm/proprietor
- Copy of GST certificate/ GST number of the firm/proprietor
- Copy of RTGS/Bank details
- Manufacturer's authorization form if applicable
- The bidder must be a registered company as per the Companies Act 1956/2013. Necessary certificate shall be attached. The authorization business partner must submit letter of endorsement from the OEM, if applicable.
- The bidder should not have been banned/suspended/blacklisted for any reasons by any government organizations/PSU/CSIR lab in the last 3 years. A self-certified letter must be submitted along with bid.