UNIVERSITY OF KALYANI



NOTICE INVITING E-TENDER

Tender ID showing at http://wbtenders.gov.in: 2022_UOK_389505_1 Tender Ref. No.: KU/NIET/AKP/CHEM/2022-23/01 Dated: 11/07/2022

E-Tender is invited for Supply and installation of Electrochemical Impedance Spectroscopy with Accessories, Photo-Electrochemical Spectroscopy's Light Source with Accessories and High Voltage DC Power Supply, University of Kalyani by the eligible venders. Interested venders may follow the instructions as given below for submission of their tenders under online mode:

A) Electrochemical Impedance Spectroscopy

Technical Specifications and Configuration of Multichannel Electrochemical Workstation and accessories are given below in details.

| 1 | Configuration | Multichannel Electrochemical Workstation with minimum 1 | |
|---|----------------------------|--|--|
| | Design | channels or more | |
| 2 | General Description | Multi-channel Electrochemical work station for testing and Evaluating, Water Splitting, Corrosion, Supercapacitor, Solar Cell, Fuel Cell and All Battery components in single/multiple unit cells simultaneously with high accuracy and precision Chassis: Multichannel Single Chassis High Precision Columbic Efficiency Determination Electrochemical Impedance Spectroscopy (EIS) measurements at both the channels with Equivalent Circuit Modelling Internal Resistance Determination Software Controlled Data Acquisition with Minimum Sampling rate | |
| 3 | Specification for Channels | Should be able to measure Ece vs Ref and Ewe vs Ref Cell Connection: 2, 3, 4, 5 electrodes (+ ground) or more and at least 1 meter Cell cable Compliance Voltage: ± 10 V or better per channel Applied Voltage: ±10 V or better per channel Maximum Output Current: ± 1 A or better at ± 10 V per channel Current Ranges: ± 10 μA to 1 A or better Accuracy of applied and measured current: ± 0.1% Full scale range or better Resolution of applied potential: 1 μV or better Voltage accuracy: 0.1% of Full scale range or better Measured current resolution: 0.8 nA on lowest current range Potentiostat Rise/fall Time: <500 nS or better Frequency range: 10 μHz to 1 MHz or better Impedance accuracy of 1% & 1° at 1Hz Input Impedance: 1 TΩ or better | |

| | | • Gain bandwidth range of amplifier: 1 MHz or better |
|---|---------------------------|--|
| | | Bandwidth of electrometer: 1 MHz or better |
| | | • Input bias current: 20 pA or better |
| | | • Cyclic Voltammetry with scan rates 10 mV/Sec to 100 V/Sec or better |
| | | • Ac Amplitude: 0.5 mV – 2.5 V |
| | | • Floating mode Floating mode should be available |
| | | • Interface for connection with PC: Ethernet LAN |
| | | Local Area Network to access Multiple Computers |
| | | • Possibility to upgrade to high current up to 10 A using booster |
| | | |
| | | |
| 4 | Complete | • Water splitting application, Constant Current and constant Voltage |
| | software with | method |
| | following | • Galvanostatic Charge / Discharge (Including C rate control) |
| | specification | with voltage vs. time Graph plots |
| | | • Multi-graph window capable of displaying up to 10 graphs |
| | | within a single window |
| | | • Customize variables graph plot for each axis |
| | | • Voltage vs. Capacity plot during Charge/Discharge Cycles |
| | | • At least 3 limits and 3 recording conditions per |
| | | sequence/cycle (ability to limit a cycle or changeover to next |
| | | sequence with Time, Voltage/Current, Charge/Power all |
| | | simultaneously) Multiple recording conditions · Industrial CC-CV |
| | | Method (Constant Current - Constant Voltage) |
| | | • Cyclic Voltammetry, Current Scan (Current/Galvano Dynamic), |
| | | Voltage Scan (Potentio Dynamic) Constant Power / Constant |
| | | Resistance |
| | | • GITT and PITT Techniques |
| | | • Columbic Efficiency Determination with fitting tool |
| | | • Current Interrupt |
| | | • Rest Time |
| | | Multiple loops |
| | | |
| | | Provision to connect and control External devices like Furnace, Thermal chambers |
| | | |
| | | • Monitoring status of each Channel using Global Table/Summary Table |
| | | |
| | | • Option to update the experimental setting parameters on current running experiment without pausing /stopping the |
| | | current running experiment without pausing /stopping the channel/experiment |
| | | |
| | | Profile Importation to study Urban Life Cycle Tests |
| | | • Analysis tools like Integral, Circular or linear fit and |
| | | Electro chemical EIS -Z fit should be available |
| 5 | Floatrockamical | • Floating mode and Ground mode both should be available |
| 3 | Electrochemical | Real-time fit and simulation analysis as well as live data |
| | Impedance Spectroscopy | plotting option for simulation plot must be available as default |
| | (EIS) | software protocol. Real time needed for Lissajous curve, |
| | | Nyquist, Bode, Admittance and Dielectric & Mott-Schottky. The |
| | | fit and simulation software should include basic options such as |
| | | find circle, element subtraction and an equivalent circuit |
| | | library with all the modern EIS equivalent circuit models. |
| | | Minimum visible plots in real time should be 8 or more. EIS |

| 1 | | | |
|------------------|--|--|--|
| | Modeling with Equivalent Circuit Fits. Simultaneous impedance | | |
| | measurement at counter electrode and working electrode. | | |
| Cell, Electrodes | Electrochemical Cell System includes one glass cells | | |
| and cell cables | • Glassy carbon working electrode (6 mm) - 1 no | | |
| | • Reference Electrode Ag/AgCl (6 mm) -1 no | | |
| | • Pt counter Electrode(0.5 mm diameter) - 1 no | | |
| | ◆ Cell Cables – 1 No (at least 1 metre long) | | |
| | | | |
| Dummy Cell | Dummy cell to be provided for internal validation. | | |
| Maintenance | The channels should be plug & play type and easy to install or to be | | |
| | removed | | |
| Warranty | At least one year's comprehensive warranty | | |
| | (1/1/1-part/labour/onsite) in all respect, including spares and services | | |
| | from the date of installation. | | |
| Service support | Efficient service facilities with trained engineers from local/Kolkata | | |
| | area should be provided whenever necessary, contact details of | | |
| | engineer should be provided. | | |
| Accessories | 1) Custom Make - H Cell Kit: 40-50 mL capacity Quartz for photo | | |
| | electrochemical application with Cap-1 no | | |
| | 2) Electrolysis cell 100 mL Vial with Teflon cap- 1 no | | |
| | 3) Computer configuration: Core- i5 Processor, 8 GB RAM, 1 TB Hard | | |
| | Drive, 19 inch LED Monitor, Keyboard, Mouse. | | |
| | Dummy Cell Maintenance Warranty Service support | | |

B) Photo-Electrochemical Spectroscopy's Light Source

Technical specifications of Light Source Set up and accessories are given below in details.

| acceptable. 7) Power Supply should have Constant Power, Current and Intensity control modes. 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 1) | The light source (one quantity) should have Lamp Housing, Power Supply, | |
|--|-----|---|--|
| 3) Lamp housing should have a back reflector to collect more light. 4) Illumination area ≥33 mm. 5) Condenser should be better than or equivalent to F/1 6) Power Supply should be independent one and integrated power supply not acceptable. 7) Power Supply should have Constant Power, Current and Intensity control modes. 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | | Xenon Lamp and necessary cables and connectors etc. | |
| 4) Illumination area ≥33 mm. 5) Condenser should be better than or equivalent to F/1 6) Power Supply should be independent one and integrated power supply not acceptable. 7) Power Supply should have Constant Power, Current and Intensity control modes. 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 2) | Highly stabilized 300 Watt Xe arc lamp source | |
| 5) Condenser should be better than or equivalent to F/I 6) Power Supply should be independent one and integrated power supply not acceptable. 7) Power Supply should have Constant Power, Current and Intensity control modes. 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 3) | Lamp housing should have a back reflector to collect more light. | |
| 6) Power Supply should be independent one and integrated power supply not acceptable. 7) Power Supply should have Constant Power, Current and Intensity control modes. 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 4) | Illumination area ≥33 mm. | |
| acceptable. 7) Power Supply should have Constant Power, Current and Intensity control modes. 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 5) | Condenser should be better than or equivalent to F/1 | |
| Power Supply should have Constant Power, Current and Intensity control modes. USB or RS-232 communication interface. Should be CE certified and should compliant with RoHS. Line regulation should be ≤ 0.1% Light Ripple < 2% rms Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. Safety interlock should be given from overload/over temperature / electrical shock, etc. Should work in Indian Power standards. ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 6) | Power Supply should be independent one and integrated power supply not | |
| 8) USB or RS-232 communication interface. 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | | acceptable. | |
| 9) Should be CE certified and should compliant with RoHS. 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 7) | Power Supply should have Constant Power, Current and Intensity control modes. | |
| 10) Line regulation should be ≤ 0.1% 11) Light Ripple < 2% rms 12) Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. 13) Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 8) | USB or RS-232 communication interface. | |
| Light Ripple < 2% rms Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. Safety interlock should be given from overload/over temperature / electrical shock, etc. Should work in Indian Power standards. ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 9) | Should be CE certified and should compliant with RoHS. | |
| Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. Safety interlock should be given from overload/over temperature / electrical shock, etc. Should work in Indian Power standards. ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 10) | Line regulation should be $\leq 0.1\%$ | |
| Temperature sensor and cooling system should be work together for safety temperature maintenance of lamp housing. Safety interlock should be given from overload/over temperature / electrical shock, etc. Should work in Indian Power standards. ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 11) | Light Ripple < 2% rms | |
| temperature maintenance of lamp housing. 14) Safety interlock should be given from overload/over temperature / electrical shock, etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 12) | Should be able to use with 200-500 Watt Xe and Hg/Hg(Xe) lamps. | |
| Safety interlock should be given from overload/over temperature / electrical shock, etc. Should work in Indian Power standards. ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 13) | Temperature sensor and cooling system should be work together for safety | |
| etc. 15) Should work in Indian Power standards. 16) ISO certified system 17) Future upgradation with Monochromator, Filter Wheel etc should be possible. 18) Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 14) | 1 0 | |
| Should work in Indian Power standards. ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 14) | | |
| ISO certified system Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | 15) | | |
| Future upgradation with Monochromator, Filter Wheel etc should be possible. Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | | | |
| Warranty: At least one year's comprehensive warranty (1/1/1-part/labour/onsite) in all respect, including spares and services from the date of installation. | | | |
| in all respect, including spares and services from the date of installation. | | | |
| | 10) | | |
| | 19) | Service: Local Service should be available | |

| 20) | Accessories: | |
|-----|---|--|
| | • Filter Holder for holding 2x2 inch Filters in multiple numbers -1 Qty | |
| | • 2x2 inch Longpass filter with 400 nm cut-on -1 Qty | |
| | • 2x2 inch Longpass Filter with 1020 nm cut-on-1 Qty | |

C) High Voltage DC Power Supply

Application of programmable DC power supply is for generation of electric field between two electrodes. The essential cables and software should be supply to interface with computer.

Technical specifications of dc power supply

| S No | Parameters | Specifications | |
|----------|---|---|-------------------------|
| | | Voltage Range | Minimum 0–800 V or more |
| 1 | OUTPUT RATING | Current Range | Minimum 0–1.4 A or more |
| | | Power | Minimum 360 W or more |
| | RIPPLE AND NOISE | CV p-p | 150 mV |
| 2 | (Noise bandwidth 20 MHz, ripple bandwidth | CV rms | 30 mV |
| | 1 MHz) | CC rms | 5 mA |
| 3 | PROGRAMMING | Voltage | 0.1% +400 mV |
| 3 | ACCURACY | Current | 0.1% + 2 mA |
| 4 | | Voltage | 0.1% +400 mV |
| 4 | READBACK ACCURACY | Current | 0.1% +2 mA |
| | | Rise Time | 150 ms |
| | | Fall Time (full load) | 300 ms |
| 5 | RESPONSE TIME | Fall Time (no load) | 2000 ms |
| | | Load Transient Recovery Time (load change from 50 to 100%) | 2 ms |
| C | PROGRAMMING RESOLUTION (by PC | Voltage | 14 mV |
| 6 | Remote Control Mode) | Current | 1 mA |
| 7 | MEASUREMENT RESOLUTION (by PC | Voltage | 14 mV |
| 7 | Remote Control Mode) | Current | 1 mA |
| 8 | FRONT PANEL DISPLAY ACCURACY | Voltage | 0.1% ±400 mV |
| O | | Current | 0.1% ±2 mA |
| 9 | ANALOG CONTROL | External voltage or resistance control of output, voltage and current monitor outputs, turn-on, turn-off control, status monitoring, 26-Pin Connector (Rear Panel). | |
| 10 | INTERFACE | Interface for connection with PC can be done. USB: 1.1/2.0,Type A Host (Front Panel), Type B Control (Rear Panel). LAN: 100BASE-T (100 Mb/s). GPIB: (with optional 2260B-GPIB-USB Adapter) | |
| 11 | AC INPUT RANGE | 85 VAC-265 VAC, 50/60 Hz, Single Phase | |
| 12 | MAXIMUM POWER CONSUMPTION | 500 VA | |
| 13 | POWER FACTOR | 0.97 to 0.99 (typical). | |
| 14 | | Operating: 0° to 50°C, 20% to 85% RH. | |
| | ENVIRONMENT | Storage: –25° to 70°C, 90% RH or less | |

| 15 | TEMPERATURE COEFFICIENT (after 30 | Voltage: 100 ppm/°C. | |
|----|-----------------------------------|--|--|
| 15 | minutes warm-up) | Current: 200 ppm/°C | |
| 16 | SAFETY | Complies with European Union Low Voltage Directive | |
| 17 | WARRANTY | At least three year's comprehensive warranty (3/3/3-part/labour/onsite) in all respect, including spares and services from the date of installation. | |
| 18 | Service Centre | Should have service centre in India and NABL accredited calibration centre in India. | |

Dates & Information:

| Sl.No. | Activities | Date & Time |
|--------|--|---|
| 1 | Date of uploading of N.I.T. Documents in the e-tender portal of NIC : https://wbtenders.gov.in | 11 th July, 2022 |
| 2 | Documents download (online) | 11 th July, 2022 (from 5.00 p.m.) |
| 3 | Bid Submission Start Date(on line) | 11 th July, 2022 (from 5.00 p.m.) |
| 4 | Bid Submission Closing Date (Online) | 30 th July, 2022 (up to 3.00 p.m.) |
| 5 | Bid Opening Date (Online) – Technical Bid | 1 st August, 2022 (from 3.00 p.m.) |
| 6 | Date of uploading list for technically qualified bidder (online) | To be notified |
| 7 | Date of opening of Financial Bid | To be notified |
| 8 | Date of uploading of list of bidders along with the approved Rate | To be notified |

1. General Instructions:

In the event of e-tendering, intending bidder may download the tender documents from the website: http://wbtenders.gov.in directly with the help of Digital Signature Certificate (DSC) or from the University of Kalyani's website www.klyuniv.ac.in.

2. Submission of bids:

Both Technical bid and Financial Bid are to be submitted concurrently duly digitally signed by the Company personnel who is in the pay roll of the Company (having Authorization from the Company management) in the website http:// wbtenders.gov.in. All papers must be submitted in English language.

3. Time Schedules for the e-tender:

The Time Schedule for obtaining the Bid Documents, Pre Bid meetings, the submission of bids and other documents etc. will be as per the list provided in Clause No. 10 given below.

4. Eligibility for Quoting:

Manufacturers or Dealers/Distributors/Agents duly authorised by the manufacturers who are able to supply the assured quantities as per requirement & have requisite qualification for meeting the requirements as per this tender are only eligible for quoting.

Further, vendors who were declared black listed and/or insolvent by any Govt. Concern/any Institutions in the Country for particular item or items are not eligible to participate in the current tender for that item or items.

5. Annual Turnover Requirements:

Vender having average annual Turn Over for last three financial years is more than Rs.30 Lakh in India for the year 2019-20, 2020-21 & 2021-22 in the said financial years are eligible to participate in the Tender.

6. Submission of Tenders

6.1 General process of submission

Tenders are to be submitted online through the website stated in Clause 1. All the documents uploaded by the Tender Inviting Authority form an integral part of the contract. Tenderers are required to upload all the tender documents along with the other documents, as asked for in the tender, through the above website within the stipulated date and time as given in the Tender. Tenders are to be submitted in two folders at a time, one is Technical Bid and the other is Financial Bid .The tenderer shall carefully go through the documents and prepare the required documents and upload the scanned documents of originals in Portable Document Format (PDF) to the portal in the designated locations/folders of Technical Bid. He needs to fill up the BOQ in the designated cell and upload the same in designated location of Financial Bid. The documents uploaded are virus scanned and digitally signed using the Digital Signature Certificate (DSC). Tenderers should specially take note of all the addendum/corrigendum related to the tender till the bid submission ends. Tenderers should in general upload the latest documents as part of the tender, however, in case of failure in uploading such documents, it will be deemed that they (tenderers) have taken note of such latest documents including addendum/corrigendum, if published till the bid submission ends.

6.2 Technical Bid

The Technical Bid should contain scanned copies and/or declarations in the following standardised formats in two covers (folders):

I. Technical File (Statutory Cover) containing:

1. Annexure –

- a) Basic Information (Vide Annexure I) (to be submitted in "Annexure" folder)
- b) Application for Tender (Vide Annexure II) (to be submitted in "Annexure" folder)
- c) Authorization letter (Vide Annexure III) (to be submitted in "Annexure" folder
- d) Affidavit Proforma (Vide Annexure IV) (to be submitted in "Annexure" folder)
- e) DECLARATION ON NIT (Vide Annexure V) (to be submitted in "Annexure" folder)
- Technical details of the Items Quoted (Bidders must submit Technical specification along with Catalogue of the item quoted in "Technical Details" Folders.
- 3. Audited Annual Accounts for last three years 2019-20, 2020-21 & 2021-22 or during the period since formation of the Firm, if it was set up in less than such 3-year period. (to be submitted in "Accounts" folder)
- II. My Document (Non-Statutory Cover) containing as follows:

| | | | PAN Card of the Bidder | |
|---|--------------------------|-----------------------|---|--|
| 1 | Certificates | Certificates | GST Registration Certificate | |
| | | | Profession Tax Enrolment Certificate | |
| | | Company Details 1 | Trade Licence/Enlistment Certificate | |
| 2 | Company Details | | Registration with Registrar of Companies | |
| _ | Company Detains | | Memorandum of Articles for Limited Companies. | |
| 3 | Credential | Credential 1 | a) Copy of the purchase order for supplying Similar nature of items at least for last 2 years in an Institute of Higher Learning b) Brief User List preferably for users in West Bengal in an Institute of Higher Learning | |
| | Financial Information | Payment Certificate 1 | Income Tax Returns submitted for the Assessment year 2020-21 | |
| 4 | | | Income Tax Returns submitted for the Assessment year 2021-22 | |
| | | | Income Tax Returns submitted for the Assessment year 2022-23 | |
| | | | GST Return for January'22, February'22 and March'22 | |

6.3 Financial Bid

The Financial Bid should contain the following document in one cover (folder):

<u>Bill of Quantities (BOQ)</u>: The tenderer should fill-up the designated cell as marked by the University in the BOQ sheet.

7. The tenderers are not required to submit hard copies of Technical File (Statutory) or My documents (Non-Statutory). Submission of hard copy of Financial Bid is strictly prohibited and only be submitted through on line through NIC portal.

8. Evaluation of the tenders

During the tender evaluation process, the "Technical Bid" will be opened first. Those Bidders who have qualified in respect of the essential & other requirements in "Technical Bid" will be identified and their financial bid will be opened. The financial bid of those Tenderer failing to meet the technical & other requirements laid down in the tender will not be opened and be rejected. The Tenderer offering the item found suitable and as per the tender specifications will only be selected. Final selection of the bidder in respect of Financial Bid is subject to further verification of several parameters allied with Financial Bid Evaluation. The Financial Bids of only those tenderers who have been considered as Technically Qualified will be opened.

9. TERMS & CONDITIONS REGARDING PURCHASE POLICY OF TENDERING AUTHORITY:

- 9.1 **Bid Information**:
 - a) Bidder may quote Currency as available in the BOQ Sheet.
 - b) The rate quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
 - c) Bidder must follow the instruction for filling up BOQ as per Clause 6.3.
 - d) Partial Quotation/Incomplete Quotation both for Technical and Commercial aspects may subject to cancellation of tender. However, University Authority is the sole authority to assess the Partial Quotation/Incomplete Quotation based on the tender evaluation status.
- 9.2 **Evaluation of Quotation**: The Purchaser will evaluate and compare the quotations determined to be substantially responsive stage wise. Firstly, Technical Bid will be evaluated and thereafter Price Bid for technically qualified bidders will be evaluated for selection of vender.
- 9.3 **Award of Contract**: The purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive both technically and commercially for both the equipments. Purchaser reserves the right to reject any or all the tender, wholly or partly, without assigning any reason thereof and shall not be bound to accept the lowest bid.
- 9.4 University enjoys the discretion to select vendor either in full or in part (item wise) for the betterment for pursuing of tender objectives.
- 9.5 **Warranty:** The manufacturer should give guarantee/warrantee for a period not less than 1 year from the date of successful installation to the satisfaction of the University. If the equipment installed at one location is subsequently shifted to another location, the warranty services shall continue to be provided at new location without any additional financial implications. Undertaking that during warranty period, if any defect in the supplied equipment is noticed by the Purchaser, the supplier or his representative shall rectify the defect or replace the defective item free of cost at the Purchaser's site at the earliest possible, latest within a period of 30 days of notification.
- 9.6 Adequate support service facility: The bidder/manufacturer should have adequate service and accessories support centre in Kolkata/Kalyani or around 80 KM distance from University premises for any emergency breakdown/fault offering facility within 48 hours and should be agreeable to provide AMC facility after the warranty period.
- 9.7 Bidder must provide Technical Compliance Sheet as per the Tender Specification. Any non-compliance will lead to rejection of tender.
- 9.8 **Manufacturer's Authorisation**: Document in support of Manufacturer/Dealer and Service Provider has to be submitted along with the tender paper. If the bidder is not the manufacturer, proper manufacturer's authorization and warranty from manufacturer is required and in this case bidder should have full-fledged registered office in India.
- 9.9 Bidder should submit copy of updated Trade Licence, GST, IT and P.Tax Return submission document.
- 9.10 **Credentials**: Documents of supplying similar items in last two previous years in an Institute of Higher Learning must be submitted along with the tender. Bidder must submit User List with copy of Purchase Order ensuring sale of similar items at least for five times in last three years in an Institute of Higher Learning.

- 9.11 **DSIR Certification**: University of Kalyani possesses the privilege for availing the facility of procuring items at Concessional Customs Duty and without incurring any excise duty as per DSIR certification.
- 9.12 **GST Exemption Certification**: University of Kalyani possesses the privilege for availing the facility of procuring items at Concessional GST as per the decisions taken by GST Council followed by the DSIR Certification.
- 9.13 Statutory deduction for GST and other Government taxes will be made as per the law in force
- 9.14 **Make & Model**: Bidder must mention Make and Model in the Information Sheet as given vide Annexure-I and must send the product details/catalogue/brochure in the "**Technical Details**" folder along with Technical Compliance Sheet for each item component.
- 9.15 **Time Schedule**: The supply work must be completed within **30 days** from the date of receipt of the work order.
- 9.16 **Validity of offer**: A bidder should spell out in the tender that it shall remain valid for a minimum period of three months from the date of opening of the tender and during this period, the bidder shall not be entitled to revoke or cancel its offer.

9.17 After Sales Service

- (i) The name and complete address of the company in India authorized by the manufacturer, to provide after sales service for the equipment should be mentioned. The appointed authorized service provider should be holding a valid certificate from the manufacturer to this effect.
- (ii) The manufacturer should give an undertaking that after the warranty period, they shall provide spares and after sale service of the equipment in India for the normal life time of the equipment.
- 9.18 University reserves the discretion to issue work order either in full or phase wise depending upon the requirement and selected vendor will not charge any extra amount for such supply and delivery.

9.19 Place of delivery: Department of Chemistry, University of Kalyani, Kalyani -741235.

9.20 **Payment Schedule**: Payment be made after delivery of the items.

9.21 **Performance Security**:

Successful bidder should deposit Performance Security money equivalent to the 3% of the order value in the form of DD/ suitable negotiable instruments as to be decided by the University immediately after issuing purchase order from the University. Such security will be refunded after completion of the warranty period in normal case without any accrued interest. In absence of any such deposit, equivalent sum will be deducted by the University from the Bill amount at the time of releasing payment to the vender. However, University may forfeit the Security Money in the event of the following circumstances:

- i) Selected bidder withdraws the bid before expiry of its validity but after receipt of the Purchase Order.
- ii) Selected bidder does not accept the order after issuing the same or fails to enter into a contract within validity period of offer.

- iii) Selected bidder fails to supply the items within the scheduled time as specified in the Purchase Order
- iv) If before expiry of the warranty period, the supplied items break down or do not function satisfactorily due to the cause related with the item itself or for its installation and not for any reason caused by the University Authority and the supplier denies to take the responsibility to make the supplied items in order.
- v) In case of any false submission /statement by the bidder
- vi)In case of any refusal to abide by terms and conditions or refusal to enter into a written agreement as per prefixed terms and conditions
- 9.22 **Quantity Changeability**: Quantity as stated in the tender document may subject to change at the time of issuing purchase order due to the fund crunch or for other valid reasons.
- 9.23 **Requisite Documents to be submitted:** Bidder must have adequate documents relating to Trade License and updated returns for Income Tax, GST, Audited Statement of Accounts and other documents.
- 9.24 **Instruction Made with Item Specification**: Bidder must comply the instructions as provided with Item Specification.
- 9.25 **Disposal of Disputes**: In case of any dispute, the University's decision will be treated as the final and conclusive. All legal actions are subject to Kolkata jurisdiction only.
- 9.26 Conditional bid may be liable for rejection.

Discretion of the University:

- 9.27 University may take decision about non-purchase of the said item even after selection of vendor due to its fund constraints.
- 9.28 University may seek documents from the bidder in addition to the scanned documents sent by them at the time of uploading technical bid for verification and evaluation of tender.
- 9.29 University reserves the right to relax any clause as stated hereinabove for selection of responsive vender.
- 9.30 For any situation arising out of COVID-19, University will no longer be responsible.
- 10. Opening the financial bid as per schedule will BE NOTIFIED LATER ON.
 - Financial bid can be seen & accessed by the bidder through the NIC Portal on line after opening of financial bid on line. No objections raised by any Bidder in this respect will be entertained by the University. No informal tender will be entertained in the Bid further.
- 11. During the scrutiny, if it comes to the notice to tender inviting authority that the credential or any other paper found incorrect/ manufactured/ fabricated, that bidder would not allowed to participate in the tender and that application will be rejected outright without any prejudice.
- 12. The Tender Selection Committee reserves to right to cancel the N.I.T. due to unavoidable Circumstances and no claim in this respect will be entertained.

Annexure I

FURNISHING BASIC INFORMATION

(To be furnished in the Company's official letter pad)

| | (| T . J |
|----|---------------------------------|---|
| 1. | Name of the Bidder | |
| 2 | Address for Communication | |
| 3 | Contact Number(s) | |
| 4 | E-mail ID | |
| 5 | Trade License No. | |
| | (Please enclose copy of Trade | |
| | License) | |
| 6 | PAN(Please enclose copy of | |
| | PAN Card) | |
| 7 | GST No.(Please enclose copy | |
| | of GST) | |
| 8 | Do you have previous | Yes/No |
| | experience for supplying | (Please put tick mark) |
| | similar nature of Items at | |
| | Educational Institute of | |
| | Higher Learning | |
| | (Please enclose copy of | |
| | Purchase order & user list, if | |
| | yes) | |
| 9 | Annual Turnover as per | 2019-20: Rs |
| | Audited P/L ACCOUNTS & | 2020-21: Rs |
| | BALANCE SHEET | 2021-22: Rs |
| | | Average Annual Turnover: Rs |
| 10 | Status of the bidder(Please | Manufacturer/Dealer/Distributer/Selling |
| | enclose copy authenticating | Agent/Stockiest |
| | your status) | (Please put tick mark) |

I hereby declare that the above information is true and correct to the best of my knowledge and belief. In case of any false/wrong/misleading information, I shall be bound to take the decision taken by the University.

Signature of the Bidder (With Seal)

Annexure II APPLICATION FOR TENDER

(To be furnished in the Company's official letter pad with full address and contact no, E mail address etc)

To
Dr. Astam Kumar Patra
Assistant Professor
Department of Chemistry
University of Kalyani,
Kalyani-741235,
Nadia, West Bengal

α.

Sub: NIT for the Supply and installation of Electrochemical Impedance Spectroscopy with Accessories, Photo-Electrochemical Spectroscopy's Light Source with Accessories and High Voltage DC Power Supply, University of Kalyani.

Ref: - KU/NIET/AKP/CHEM/2022-23/01 dated: 11/07/2022

| 5 1r, | |
|--------------|---|
| | Having examined the pre-qualification & other documents published in the N.I.T, I /we |
| | hereby submit all the necessary information and relevant documents for evaluation: |

- 2. We accept the terms and conditions as laid down in the tender document vide **Clause 9** and declare that we shall abide by it throughout the tender period including its extensions, if any.
- 3. We have gone through the Tender Document thoroughly and quoted the tendered items keeping in mind all sorts of information as furnished in the tender document including Corrigendum/Addendum as published from time to time
- 4. We are offering rate for the following item /items with printing capacity and assured supply to the University of Kalyani

| Items | Make & Model No. | Warranty Offered | | | |
|-------|------------------|------------------|--|--|--|
| | | | | | |
| | | | | | |

| ll make the supply within the stipul ontrol. | ated period excepting |
|---|-------------------------------|
| | cluding title and capacity in |
| which application is made | . |
| | ontrol. |

Annexure III

(Authorization letter in favour of the applicant (other than Managing Director/ Proprietor/Partner) from the competent authority.)

FORMAT

(To be furnished in the Company's official letter pad with full address and contact no, E mail Address etc)

(TO WHOM IT MAY CONCERN)

| This is to certify that Mr. | (Name), |
|--|-----------------|
| Employee of this Organisation as(Official | Designation) is |
| Hereby authorised to submit tender online, Vide NIT No | , |
| Dated on behalf of the Organisation. | |
| | |
| Signature of the competent authorit | ty with Seal |
| (Signature of the Authorised Person) | |
| Signature of Mr | |
| is hereby attested. | |

Signature of the competent authority with Seal

ANNEXURE IV

(Affidavit Proforma) (To be furnished in Non – Judicial Stamp paper of appropriate value duly notarized)

Ref: - KU/NIET/AKP/CHEM/2022-23/01 dated: 11/07/2022

| I, Sri/Smt |
|---|
| The Managing Director/Proprietor (etc.) of the Firm |
| At (address) |
| Do hereby solemnly affirm and declare as follows: |
| 1. That I have not ever been convicted of any offence making myself liable to be disqualified to supply of Chemicals / Equipments/other items to any Govt. or Govt. undertaking Organization /Institution in the State of West Bengal or other State or States. |
| 2. That no case is pending against me or against my firm in any criminal court of law to supply of Chemicals, Lab. Chemicals & Laboratory Equipments and other items to the Govt. or Govt. undertaking Organization / Institution in the State of West Bengal or other State or States (If any case is pending, state the details). |
| 3.That, I also declare that if any information subsequently found incorrect or false will it automatically render the tender submitted by me cancelled and make me liable for penal/legal action as per law of the country. |
| 4. That my concern has not yet been declared bankrupt by any banking or money lending agency duly licensed by RBI nor has it been considered doubtful by any Government concern so far as the solvency of the organisation is concerned. |
| 5. That I do further affirm that the statements made by me in this tender are true to the best of my knowledge and belief and all the documents attached are genuine & correct. |
| |
| Deponent(s). |

ANNEXURE V

DECLARATION ON NIT

(To be typed in company letter pad, scanned and uploaded)

| I | , the undersigned, do hereby declare that in respect of Tender Ref. No. KU/NIET/AKP/CHEM/2022-23/01 dated: 11/07/2022 |
|---|--|
| • | On behalf of my organization, I will comply all the formalities that are required to be complied as per NIT and I will observe all clauses of the NIT (including Terms & conditions). |
| • | In case of any non-observance of any clause(s) of NIT, my organization will be bound to follow the decisions taken by the University of Kalyani for taking decision related with the tender for which the said NIT was uploaded. |

| | Full signature of the Person |
|-------|------------------------------|
| | (Designation with Seal) |
| te: | |
| lace: | |

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|---------------|----------|--|
| 1 | /alidate | |

Print



Пеір

Tender Inviting Authority: Department of Chemistry , University of Kalyani

Name of Work: Supply and installation of Electrochemical Impedance Spectroscopy with Accessories, Photo-Electrochemical Spectroscopy's Light Source with Accessories and High Voltage DC Power Supply, University of Kalyani.

Contract No: KU/NIET/AKP/CHEM/2022-23/01

| Name of | ſ |
|---------|---|
| the | l |
| Bidder/ | l |

PRICE SCHEDULE

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)

| NUMBER | TEXT# | NUMBER # | TEXT # | TEXT # | NUMBER # | NUMBER | NUMBER | NUMBER # | NUMBER # | TEXT # |
|------------|---|----------|--------|--|---|--------------|-----------|---|----------|--------------------------|
| SI. No. | Item Description | Quantity | Units | Quoted Currency in INR / Other Currency | BASIC PRICE Per Unit allowing Educational Discount, if any,for all Quantites In Figures To be entered by the Bidder Rs. P | GST on Basic | Any Other | TOTAL AMOUNT, It will be converted based on coloumn L value in Rs. P | - | TOTAL AMOUNT In Words |
| 1 | 2 Supply and installation of Electrochemical Impedance Spectroscopy with Accessories, Photo-Electrochemical Spectroscopy's Light Source with Accessories and High Voltage DC Power Supply, University of Kalyani. | 4 | 5 | 12 | 13 | 14 | 17 | 53 | 54 | 55 |
| 1.1 | (A) Electrochemical Impedance Spectroscopy (Detail Specification as per NIT) | 1.00 | No | INR | | | | 0.0000 | 0.0000 | INR Zero Only |
| 1.2 | Accessories: 1) Custom Make - H Cell Kit: 40-50 mL capacity Quartz for photo electrochemical application with Cap-1 no (Detail Specification as per NIT) | 1.00 | No | INR | | | | 0.0000 | 0.0000 | INR Zero Only |
| 1.3 | 2) Electrolysis cell 100 mL Vial with Teflon cap- 1 no (Detail Specification as per NIT) | 1.00 | No | INR | | | | 0.0000 | 0.0000 | INR Zero Only |
| 1.4 | 3) Computer configuration: Core- i5 Processor, 8 GB RAM, 1 TB Hard Drive, 19 inch LED Monitor, Keyboard, Mouse. (Detail Specification as per NIT) | 1.00 | No | INR | | | | 0.0000 | 0.0000 | INR Zero Only |
| | (B) Photo-Electrochemical Spectroscopy's Light Source (Detail Specification as per NIT) | 1.00 | No | INR | | | | 0.0000 | 0.0000 | INR Zero Only |

| | Accessories: 1) Filter Holder for holding 2x2 inch Filters in multiple numbers (Detail Specification as per NIT) | 1.00 N | lo INF | R | | | | 0.0000 | 0.0000 | INR Zero Only |
|------------|--|--------|---------------|---|--|--|--|--------|--------|---------------|
| | 2) 2x2 inch Longpass filter with 400 nm cut-on (Detail Specification as per NIT) | 1.00 N | lo INF | R | | | | 0.0000 | 0.0000 | INR Zero Only |
| | 3) 2x2 inch Longpass Filter with 1020 nm cut-on (Detail Specification as per NIT) | 1.00 N | lo INF | R | | | | 0.0000 | 0.0000 | INR Zero Only |
| 3 | High Voltage DC Power Supply (Detail Specification as per NIT) | 1.00 N | lo INF | R | | | | 0.0000 | 0.0000 | INR Zero Only |
| Total in F | igures | | · | | | | | 0.0000 | 0.0000 | Zero Only |
| Quoted R | Quoted Rate in Words | | | | | | | | | |