

Advertised Tender Enquiry

Department: Ceramic Engineering

Tender Notice No: NITR/PW-SR/CR/2019/138

То

Through CPP Portal (E-Procurement)

<u>Important Dates</u>		
Event	Date	Time
Pre-bid Conference	NA	NA
Last Date of submission of bid	16/09/2019	03:00 PM
Date of opening of techno-commercial bid	18/09/2019	11:00 AM

Important Dates

Dear Sir,

We intend to purchase the commodities specified below and invite quotations in accordance with the terms and conditions detailed in the bid document. If you are interested, kindly send your offer with prices and complete terms within the time mentioned above.

For any query, you may contact to:

Attention:-Prof. P. Saha, PIC, Multichannel Battery Cycler, Department of Ceramic Engineering NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ODISHA Phone: 0661 – 2462211 E-mail: sahap@nitrkl.ac.in / sahapartha29@gmail.com Yours sincerely,

Date: 19/08/2019

Name: Prof. P. Saha PIC, Multichannel Battery Cycler Project Code: SR/19/CR/011

Encl:

(1) Schedule of requirement, specifications, dates etc.

(2) Bid document containing detail terms and conditions.

1. **Schedule of requirements**

SI. No.	Description of Goods/Service	Quantity
01.	Multichannel Battery Cycler consisting of minimum 16 channels (Part A) (Detailed specification as per Annexure – I)	01 unit
02.	Multichannel Battery Cycler consisting of minimum 2 channels (Part B) (Detailed specification as per Annexure – I)	01 unit
03.	Computer (Detailed specification as per Annexure – I)	02 units
04.	Online UPS (Detailed specification as per Annexure – I)	02 units
	Accessories	
05.	Battery cell holders (Detailed specification as per Annexure – I)	01 unit
06.	Corrosion Flat Cell Kit (Detailed specification as per Annexure – I)	01 unit
07.	Small Voltammetry Cell kit (Detailed specification as per Annexure – I)	01 unit
08.	Two Electrodes Swagelok Cell (Detailed specification as per Annexure – I)	02 units
09.	Current booster (Detailed specification as per Annexure – I)	01 unit
10.	Air conditioner (Detailed specification as per Annexure – I)	01 unit
11.	Enclosed unit/hood (Detailed specification as per Annexure – I)	01 unit

2. **Specifications and allied Technical Details**

As per Annexure – I

3. Format of Quotation (tick appropriate box)



 $\sqrt{}$ It is a two-part bid with separate techno-commercial and price bids.

- 4. The bid should be submitted through https://eprocure.gov.in/eprocure/app
- Quotations should be valid for a period of 90 days from the date of opening of techno-5. commercial bid.

Some important dates: 6.

i.	Pre-bid Conference:	Date: NA	Time: NA
ii.	Last date for submission of bid	Date: 16/09/2019	Time: 03:00 PM
iii.	Date of opening of techno- commercial bid	Date: 18/09/2019	Time: 11:00 AM

7. Warranty: 03 years standard warranty.

8. Technical bid evaluation criteria:

- As per the detail equipment technical specifications given in **Annexure I**. If required, the bidder may be asked to provide clarification regarding the technical aspects.
- A complete design along with clear indication/marking of specification mentioned in the technical bidding document (wherever possible) of the unit must be provided with the bidding document.
- Scanned copy of technical brochure and website reference of the same must be included in the bid. The specification mentioned in the bid document must tally with the technical brochure.
- Technical specification of the unit with "Yes/No" format against each specification will not be considered a technical bidding document. A separate compliance sheet of technical specification with specific value of the unit along with the deviation must be included.
- During the course of technical bid evaluation, NIT Rourkela, may, at its discretion ask the bidder for clarification of its bid. The request for clarification and the response shall be in writing/email and no change in prices or substance of the bid shall be sought, offered or permitted.

9. Financial bid evaluation criteria:

- Financial bid comparison will be made on overall items/overall L1 price basis as quoted in BOQ.
- In case optional items are specified in the tendered specifications, the Purchaser reserves the right to buy or not to buy the optional items. In case the option is exercised to buy the optional items after Bid opening, then the cost of optional items would be included to ascertain the Lowest Evaluated Responsive Bid. In case, the option is exercised not to buy the optional items, then the cost of the optional items would not be included in ascertaining the Lowest Evaluated Responsive Bid.
- Prices of additional / optional items not appearing in the BOQ, if any, shall be quoted in a separate PDF file, duly signed by Bidder's authorized person/persons
- If any component/ additional instrumental unit/consumables which is required for smooth running of instrument is made in India that must be quoted in INR.
- The comparison between the indigenous and the foreign offers shall be made on FOB NIT Rourkela basis and CIF / CIP Kolkata basis, respectively.
- The Bidder shall bear all costs associated with the preparation and submission of its bid, and "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.
- Note: Where there is no mention of packing, forwarding, freight, insurance charges, taxes etc., such offers shall be treated as inclusive of all these expenses.
- **10. GST:** GST should be charge according to applicable rates.

- 11. EMD (Earnest Money deposit)/ Bid Security (BS): Bid security in shape of DD (Demand Draft) for INR 90,000/- (Rupees Ninety Thousand Only) and Tender Cost (Nonrefundable) in the form of DD for INR 500/- (Rupees Five Hundred Only) in favour of Director, NIT Rourkela Payable at Rourkela from any Scheduled Commercial Bank except Co-operative and Gramin bank. DD for the EMD (Earnest Money deposit)/Bid Security (BS) should remain valid for a period of 45 days beyond the bid validity period. EMD (Earnest Money deposit)/Bid Security (BS) of unsuccessful bidders should be return to them at the earliest and latest on or before the 30th days after the award of the contract. EMD (Earnest Money deposit)/Bid Security (BS) and Tender Cost should reach physically through speed post/ register post/courier, containing in an envelope & superscripted with subject, tender reference number addressing to Registrar, NIT Rourkela 769008, Odisha; Attention: Dr. P. Saha (CR) on or before at 11:00 AM. For more detail See Annexure I. The Bid Security (BS) should be submitted in its original form. Copies shall not be accepted so as to reach this office on or before 18/09/2019 at 11:00 AM.
- 12. Performance Security: INR 3,00,000/-(Rupees Three Lakh Only) in shape of Demand Draft (DD)/Bank Guarantee in favour of Director, NIT Rourkela and payable at Rourkela. And Performance security should remain valid for a period of 60 days beyond the date of completion of all contractual obligations of the suppliers including warranty obligation. And EMD (Earnest Money Deposit) amount of successful bidder will be return after the receipt of performance security in case of award of contract to successful bidder. For more detail See **Annexure I**.
- **13.** Please go through the enclosed "bid document" carefully for other bidding instructions.
- 14. Please send your quotations through <u>https://eprocure.gov.in/eprocure/app</u>
- **15.** For technical details, you may contact

Prof. P. SahaProfessor In Charge – Multichannel Battery CyclerProject Code: SR/19/CR/011Department of Ceramic Engineering,National Institute of Technology, Rourkela – 769 008Phone: (0661) – 2462211Mobile No. +917064031486 / 7008114012Fax:0661 – 2462999E-mail:sahap@nitrkl.ac.in / sahapartha29@gmail.com

NB: *Please furnish your Dealership Certificate (must) and Proprietary Nature Certificate (If applicable)*



SPONSORED RESEARCH, INDUSTRIAL CONSULTANCY & CONTINUING EDUCATION CELL NATIONAL INSTITUTE OF TECHNOLOGY ROURKELA – 769 008, ORISSA

BID DOCUMENT

1. Instructions to the bidders

- 1.1 Bids are invited on behalf of the Director, National Institute of Technology (NIT), Rourkela – 769008, Odisha, from the intending bidders for supply of the goods/stores/ equipments for the Institute as detailed in the enquiry letter.
- 1.2 The bidders should quote their offer/rates in BOQ in clear terms without ambiguity.
- 1.3 In case of any discrepancy between the rates in figures and that in words, the rate in words will be accepted as correct.
- 1.4 The last date for receipt of the bid is marked in the tender document.
- 1.5 The bids should be uploaded in https://eprocure.gov.in/eprocure/app Please follow the guidelines of the site.
- 1.6 If a prospective bidder requires any clarification in regard to the bidding documents, he may make a request the concerned officer or faculty member at least 15 days before the deadline for receipt of bids.
- 1.7 Bids received after the deadline of receipt indicated in para 1.4 above, shall not be taken in to consideration.
- 1.8 Each bidder shall submit only one bid. A bidder, who submits more than one bid, shall be disqualified and considered non-responsive.
- 1.9 (In respect of high value plant, machinery etc. of a complex and technical nature). The bids may be submitted in two parts, viz., technical bid and financial bid.
- 1.10 The bidder has to sign in full at all pages of the scanned part of the bidding document. No over-writing in those pages is acceptable.

2. Conditions of the bid

- 2.1 The rates quoted should preferably be net, inclusive of packing, forwarding, freight, Insurance and all other incidental charges excluding taxes. In case these charges are quoted extra in addition to the quoted rates, the amount thereof or Ad Valorem rate must be specified. Packing, forwarding, freight, entry tax etc., when quotes separately are reimbursable at actual. If external agencies are employed, their receipts must be enclosed with the invoice.
- 2.2 Duties and Taxes are to be quoted separately. Ad Valorem rates thereof should be clearly indicated with reference to the relevant Acts and Rules.

It may be noted that the Institute is availing custom duty exemption in terms of notification no 51/96 – Customs dt. 23.07.1996, Notification no.-47/2017- Integrated Tax (Rate) dt. 14.11.2017 and Notification No-45/2017 – Central tax (Rate) dt. 14.11.2017 [vid Registration No.: TU/V/RG-CDE (227)/2016, dated: 13.11.2018]

- 2.3 The goods are required to be delivered at the indenting Department of NIT, Rourkela, and must be dispatched within 60 days from the date of placement of the supply of order under the risk and arrangement of the bidder and offers with delivery beyond the above period shall be treated as unresponsive. In case the delivery time is higher, the same must be mentioned clearly in the quotation.
- 2.4 The bid should remain valid for a period of 90 days from the date of opening. In case your offer has a different validity period that should be clearly mentioned in the quotation.
- 2.5 Conditional discount, if any, offered by the bidder shall not be considered at the time of evaluation.
- 2.6 The goods offered should strictly conform to the specification and technical details mentioned in **Annexure I.**
- 2.7 The Institute may like to conduct pre-dispatch inspection of goods, where applicable.
- 2.8 Period of guarantee/warranty, where applicable, should be specified in the bid.
- 2.9 If the successful bidder, on receipt of the supply order, fails to execute the order within the stipulated period, in full or part, it will be open to the Director, NIT, Rourkela to recover liquidated damage from the firm at the rate of 1 percent of the value of undelivered goods per month or part thereof, subject to a maximum of 5 percent of the value of undelivered goods. Alternatively, it will also be opened to the Director, to arrange procurement of the required goods from any other source at the risk and expenses of the bidder.
- 2.10 The successful bidder may be required to execute a contract, where applicable.
- 2.11 The bidder has to furnish up to date GST and Income Tax Clearance Certificate along with the bid.
- 2.12 Payment (*100 percent*) will be made by Account Payee Cheque/Bank Draft, within 30 days from the date of receipt of the goods in good condition or receipt of the bill, commissioning of the equipment, where applicable, whichever is later/latest.
- 2.13 In case of Advance payment, the payment will be made on either in Foreign Demand Draft or Wire Transfer only. The proforma invoice copy need to be sent for advance payment.
- 2.14 In the event of any dispute arising out of the bid or from the resultant contract, the decision of the Director, NIT, Rourkela shall be final.
- 2.15 The bid document/resultant contract will be interpreted under Indian Laws.

Technical specifications for Research Grade Multichannel Battery Cycler

The multichannel battery cycler must be capable of testing: (1) two electrode swagelok cell (2) two/three electrode cell, (3) coin cell, (4) pouch cell, and (5) cylindrical cell.

- (1) Minimum 18 channels and upgradable and expandable to more channels for future customization.
- (2) All the channels should be independent and must operate simultaneously.
- (3) Suitable length connection cables/wires for each channel must be provided.
- (4) Minimum 16 channels unit/workstation must have the specifications outlined in Part A.
- (5) Minimum 2 channels unit/workstation must have the specifications outlined in Part B.

SI. No.	Technical Specification	
1	Part A (Minimum 16 channels unit/workstation)	
	Circuit Type: True Bipolar Linear; must allow cross-zero linearity, absolutely no	
	switching time between charge / discharge or potentiostat/galvanostat operation	
	Voltago rango: 0 E V or bottor	
	Voltage Persolution control: 150 uV or better	
	Voltage Resolution Measurement: 18 bit or better	
	Voltage Accuracy: 0.02% FSR: ±2 mV or better	
	Voltage Compliance: 0-5V or better	
	Current range: 0.5 µA-1 A or better	
	Current Resolution control: 1nA or better	
	Current Resolution Measurement: 18 bit or better	
	Current Accuracy: $< 0.05\%$ of setting $\pm 0.01\%$ of FSR	
	Input Impedance: 10 GΩ or better	
	Acquisition time: 2 mS or better	
	Data logging rate: 2000 points per second or better per system	
	Safety The safety of unit/workstation must be ensured under all circumstances and the system shall be fail safe. The system must have its own inherent "watchdog/warning system" to warn the user by audio and visual alarms in case of any emergency related to power or otherwise.	
	Software for Data Acquisition/Analysis The licensed control software of the battery cycler must have a logical menu-driven programming to set control types, termination conditions, and data logging conditions for tests. All results data must be automatically saved in an SQL database. The software must also provide control to customize tests with over 80+ meta variables in addition to using numeric values. Each step must have multiple modes of data logging, and a wide array of auxiliary options must be available to expand the interface and control capabilities. Additional two extra copies (CD-ROM) or more of licensed software should be provided.	
	Software capability Software must be capable to provide following measurements as well as controls: a. Current, Voltage, C-Rate b. Rest c. Power, Load	

d. Set Variables(s)

	 e. Current Ramp & Voltage Ramp f. Current Staircase g. Internal Resistance & CCCV h. Current Simulation & Power Simulation i. The Formula option enables to control and limit schedule steps according to dynamic mathematical equations using variables rather than fixed control value j. Ability to map auxiliary channels
	Computer A PC (Configuration: Intel i7 Processor, 3 GHz Processor Speed, 8 GB RAM, 1 TB HDD, 22-inch monitor, Keyboard and optical mouse, 64 bit compatible) with latest version of Windows compatible instrument operating software for smooth running of unit/workstation must be provided.
	Power back-up A 5 KVA or more online UPS from branded companies with minimum 1h battery backup must be provided for uninterrupted data acquisition and smooth operation of the unit/workstation.
2.	Part B (Minimum 2 channels unit/workstation) One channel has to be completely independent while functioning from second channel. Both channel/workstation must have basic electrochemical analysis facilities of the following: 1) Open Circuit, 2) Linear Scan Voltammetry, 3) Cyclic Voltammetry (Single), 4) Cyclic Voltammetry (Multiple Cycles), 5) Staircase Linear Scan Voltammetry, 6) Staircase Cyclic Voltammetry, 7) Staircase Cyclic Voltammetry (Multiple Cycles), 8) Multi-Vertex Scan, 9) Chronocoulometry, 10) Chronoamperometry, 11) Chronopotentiometry, 12) Recurrent Potential Pulses, 13) Recurrent Galvanic Pulses, 14) Linear Polarization Resistance (LPR), 15) Tafel, 16) Potentiodynamic, 17) Cyclic Polarization, 18) Potentiostatic, 19) Galvanic Corrosion, 20) Galvanostatic, 21) EN, 22) Split LPR, 23) Galvanic Control LPR, 24) Galvanodynamic, 24) Zero Resistance Ammeter (ZRA), 25) Potentiostatic EIS, 26) Galvanostatic EIS, 27) Mott-Schottky, 28) Constant Potential, 29) Constant Current, 30) Constant Power, 31) Constant Resistance, 32) 33) Current CCDPL, 34) Power CCD, 35) Resistance CCD, 36) CC-CV, 37) GITT, 38) PITT, 39) Charge-Discharge; while one channel/workstation must have dedicated electrochemical impedance spectroscopy (EIS) facilities. In future EIS upgradation should be available without changing cabinet/chassis.
	Compliance Voltage: $\pm 12V$ or better. Adjustable compliance voltage configurations will not be considered. Compliance voltage add-ons or modules have to be quoted separately. Current Compliance: ± 350 mA or better Applied Potential range: ± 10 V or better Current Ranges: ± 10 nA to ± 100 mA in minimum multiple ranges or better. Applied Current: ± 350 mA or better Voltage Resolution: 5μ V or better Applied Voltage Accuracy: $\pm 0.2\%$ of value or better Applied Current Resolution: 0.02% of current range or better Current Accuracy: 0.03% at entire current range or better Rise/Fall time: < 500 ns or lower Acquisition speed/ Data Sampling: $50,000$ samples/second or better Auxiliary inputs/ outputs: 2 Analog Inputs and 1 Analog Output, 2 Digital Inputs and 1Digital Output for both channels Maximum Scan Rate: 300 V/s or better Electrometer Bandwidth: greater than 4MHz or better Input Impedance: 1 Giga Ω or better Bias/Leakage Current: <10 pA or better Measured Voltage Range: $\pm 10V$

Electrochemical Impedance Spectroscopy and Frequency Range: 10 μ Hz to 1 MHz or better Frequency resolution < 10 ppm of the setting Sinus amplitude 0.5 mV to 2.5 V with 1 mV resolution 0.1% to 100% of the current range with resolution of 0.004% of the range. Mode single sine, multisine, FFT analysis, EIS quality indicator, built-in EIS simulation software, real time or post analysis fit-simulation, live issejous plots, live 3D plotting, real-time view of 3+ plots. Built-in analog integrator and IR compensation, capability to measure plot integrated charge and integrated current in real time.

Safety

The safety of unit/workstation must be ensured under all circumstances and the system shall be fail safe. The system must have its own inherent warning system during emergency related to power failure or other external factor.

Software for Data Acquisition/Analysis

A suitable licensed software should be available for Data acquisition and analysis. Additional two copies of licensed software (CD-ROM) should be provided. The software must be able to be downloaded to unlimited computers & fully windows based.

Software capability

Software should be capable of supporting a wide variety of electrochemical techniques as mentioned: OCV, CV, LSV GEIS, PEIS -Electrochemical Impedance Spectroscopy Technique should be available with Equivalent EIS fitting circuit analysis. Analysis tools for CV, Battery, Corrosion-Rp and Tafel Fit, Solar IV- FF, Efficiency should be available. Battery Techniques like CC-CV, GITT and PITT should be available. Battery Capacity Determination Technique should be available. Corrosion: Linear polarization with Tafel Slope Analysis, Polarization resistance evaluation, Electrochemical Noise analysis, critical pitting technique, electrochemical frequency modulation, hydrogen permeation analysis etc. Battery & Supercapacitor Analysis: Rectangular CV analysis at varying scan rates for pseudocapacitor analysis, complete charge and discharge with built in integration and 'linkable' cut-offs, Galvanostatic charge discharge with cycle number vs specific capacitance plot, Voltage measurement on counter electrode, etc. Solar Cell Characterization: I-V plotting with automatic determination for max power point & fill factor, IMPS-IMVS evaluation, EQE / IPCE Analysis, Charge extraction, Photo-current response, Mott Schottky plots for single frequency scan, etc. Electro-catalysis: ORR analysis using RDE/RRDE at varying rotation speeds and built-in Kotecky-levich plot generation, HER and OER analysis for water splitting, Carbon dioxide reduction analysis, default technique for spectro-electrochemistry based LSV, CV and Chrono evaluation, 3D Based Live Plotting: Powerful graphic engine with useful features such as individual Axis scaling, overlays, multiple Y-axes, plot addition, 3D zooming and rotation. Each plot should be saved as a vector image file to use directly in paper or presentation. Minimum 10+ plot could be plotted simultaneously.

Computer

A PC (Intel i5 Processor, 3 GHz Processor Speed, 16 GB RAM, 1TB HDD, 19-inch LED Monitor, Keyboard and optical mouse, 64 bit compatible) with latest version of Windows compatible operating software must be provided for smooth running of the unit/workstation.

Power back-up

A 2 KVA or more online UPS from branded companies with minimum 30 min battery backup must be provided for uninterrupted data acquisition and smooth operation of the unit/workstation.

Accessories	
3.	Battery cell holders Battery cell holders for coin cell (24 nos), cylindrical cell (1 no), and flat cell (1 no) must be provided (1 unit).
4.	Corrosion Flat Cell Kit A complete flat cell corrosion kit [250ml capacity with 1cm ² working area (exposure) as per ASTM Standard] with Ag/AgCl reference electrode, platinum mesh counter electrode, and glassy carbon working electrode must be provided (1 unit).
5.	Small Voltammetry Cell kit A 3-electrode Set-up: WE – 2 mm GC; CE – Pt; RE - Non-Aqueous Ag/AgCl and Aqueous Ag/AgCl; Vessel – 50 ml with teflon cap; inlet/outlet gas purging facilities must be provided (1 unit).
6.	Two Electrodes Swagelok Cell Easy to assemble Swagelok cell in PEEK (or equivalent) body with bore diameter of 8 mm must be provided (2 units).
7.	Current booster A current booster (current ± 10 A) compatible with the system must be provided (1 unit).
8.	Air conditioner 1.5 ton air conditioner (split A/C inverter type) with installation and necessary cables for uniform temperature control of the unit/workstation during testing and measurement must be provided locally (1 unit).
9.	An enclosed unit/hood A suitable enclosed unit/hood with overall dimension of 1200mm (W) x 900mm (D) x 2400mm (H) or equivalent should be provided to operate the equipment under contamination free environment and free from any external electrical/magnetic disturbances/noise etc. (1 unit).

Other qualification criteria

- 1. 3 numbers scanned copy of PO (not older than 7 years) of multichannel battery cycler (Part A and Part B) of similar or higher specification supplied within India (at least ONE from premier Government Institution and R & D Organization) and also 3 number of POs for supply in countries other than India (not older than 7 years) must be provided.
- 2. Detailed user list (at least 10) with the concerned person's valid contact details, in India and abroad where instrument is still in operational condition must be provided.
- 3. The ordered goods are required to be installed within 45 days of receipt of goods at this Institute. Installation should be carried out only by expert engineers of Supplier/Manufacturer. During the course of installation, necessary training on operation and maintenance of the goods shall be imparted to Institute's Faculties / Engineers / Technicians. Installation and training must be free of cost.
- 4. Prior installation conditions / site preparation / electrical connection required must be clearly mentioned in the quotation along with technical bidding documents.
- 5. Make and model number should be mentioned in the technical bid.
- 6. There must be a local maintenance center with availability of the spares in India.

For goods manufactured in abroad

- 1. If the instrument is of foreign origin (i.e. manufactured in foreign country) then price must be quoted in foreign currency.
- 2. The price must be mentioned with clear demarcation at every stage such as instrument price, discount, packing and forwarding, transport, insurance whichever is applicable.
- 3. Bidder should mention the country of origin and the country from which goods will be finally shipped.
- 4. In case, an Indian agent is directly submitting a bid on behalf of its Principals, a copy of the Authorization Certificate issued by the Principals in favor of the Indian agent should be furnished along with a certified copy of the Agency Agreement between the foreign Principal and Indian agent. Both these certificates must be up-to-date.
- 5. A letter in the official letter head of the principal declaring the Indian agent as their authorized agency to bid must contain the official tender enquiry number as depicted in CPP portal must be included with the technical bid. (This must not be clubbed with Authorization Certificate).
- 6. The delivery up to NIT Rourkela is solely bidder's responsibility. The price must be quoted in foreign currency up to CIP Kolkata basis. NIT Rourkela will provide the custom duty concessional certificate for the clearance.

For goods manufactured in India

- 1. The price must be mentioned with clear demarcation at every stage such as instrument price, discount, GST calculated, packing and forwarding, transport, insurance whichever is applicable.
- 2. GST at applicable rates, which will be payable on the goods if the contract is awarded.
- 3. Bidders are requested to calculate GST @5% (in this regard necessary documents will be provided to the awardee bidder at the appropriate stage).
- 4. The delivery up to NIT Rourkela is solely bidder's responsibility. Therefore, charges for inland transportation, insurance and other local services required for delivering the goods at NIT Rourkela must be mentioned in the financial bid.

Earnest Money deposit/Bid Security (EMD/BS)

The Bidder must furnish, as part of its bid, a Bid Security (BS) for an amount as specified in the Invitation for e-procurement. In the case of foreign bidders, the BS shall be submitted either by the Principal or by the Indian agent and in the case of indigenous bidders; the BS shall be submitted by the manufacturer or their specifically authorized dealer/bidder.

The bid security may be forfeited:

- 1. If a Bidder withdraws or amends or impairs or derogates its bid during the period of bid validity specified by the Bidder on the Bid Form; or
- 2. In case of a successful Bidder, if the Bidder fails to furnish order acceptance within 21 days of the order or fails to sign the contract and/or fails to furnish Performance Security within 21 days from the date of Purchase order. or
- 3. In case selected L1 bidder (after qualifying the technical bidding) fails to comply or try to change the specification of the instrument after Purchase Order has been issued; or
- 4. In case selected L1 bidder (after qualifying the technical bidding) claims the inability to supply the instrument within quoted price. or
- 5. In case selected L1 bidder (after qualifying the technical bidding) declares their inability to supply the instrument. or

- 6. In case selected L1 bidder (after qualifying the technical bidding) impose any extra condition/cost which was not mentioned in their quotation with respect to technical specification and commercial terms and conditions. or
- 7. In case bidder impose any prior installation condition/ requirement of consumables during installation at NIT, involving extra cost at purchaser's side which is not mentioned in the quotation. or
- 8. In case of any violation of GFR17.

Performance Security (PS)

Within 21 days of receipt of the notification of award/PO, the Supplier shall furnish performance security in the amount specified in tender document, valid till 60 days after the standard warranty period.

* * * * * * * * * * * * * * * *