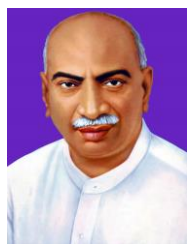
	<p align="center"> <b>MADURAI KAMARAJ UNIVERSITY</b>  <b>(UNIVERSITY WITH POTENTIAL FOR EXCELLENCE)</b>  Palkalai Nagar, Madurai 625 021, Tamil Nadu, India </p>		
<b>MKU/SOC/FCWS/03/2019-20</b>		<b>Date: 10-01-2020</b>	
<p>For and on behalf of Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, the sealed tenders (two-cover system) are invited by the Registrar, Madurai Kamaraj University, Madurai - 625 021, under the DST scheme for the supply and installation of the following equipment from the Reputed Suppliers/Executors.</p>			
<b>ITEM No.</b>	<b>NAME OF THE EQUIPMENT</b>	<b>EMD Amount</b>	<b>PERIOD OF CONTRACT</b>
1	Fuel Cell Work Station	1% to total cost of equipment + GST	90 days
<p>Tenders are invited until <b>03.00 pm on 03-02-2020</b> which will be opened by the Technical/Purchase Committee constituted by the Authorities of Madurai Kamaraj University at School of Chemistry at 04.00 pm on the same day in the presence of the Tenderers or their agents who choose to be present at the time of opening.</p>			
<p>The specifications, terms and conditions are available in the University website of <b>www.mkuniversity.org</b> from <b>10-01-2020</b>. The tender documents are available for downloading free of cost at the websites.</p> <p align="right"> <b>Prof. N. Sankar</b>  <b>REGISTRAR IN-CHARGE</b> </p>			

## TENDER SCHEDULE

Tender Announcement Date: 10-01-2020

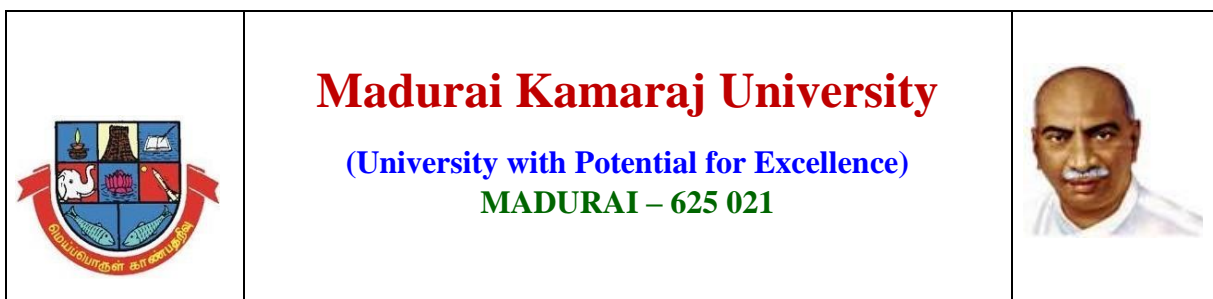
Publication Date on Portal: 10-01-2020

Last date for Submission: 03-02-2020 until 3.00 PM

Tender-Technical Bid & Price Bid Opening: 03-02-2020, 4.00 PM

## TENDER NOTIFICATION DETAILS

1.	Tender inviting Authority, Designation and Address	<b>The Registrar</b> Madurai Kamaraj University Palkalai Nagar Madurai – 625 021 Ph.No.: 0452-2458471 E-mail : mkuregistrar@rediffmail.com
2.	Name of the Work	Purchase of “Fuel Cell Work Station” to Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai - 625 021, Tamil Nadu
3.	Tender Reference	MKU/SOC/FCWS/03/2019-20
4.	Place of Execution	Madurai
5.	Tender Documents	The tender document can be downloaded from <a href="http://www.mkuniversity.org">http://www.mkuniversity.org</a> till due date and time of the Tender.  Tender documents are available for downloading free of cost at the website.
6.	Earnest Money Deposit	1% to total cost of equipment + GST
7.	Due Date and Closing Date of Tender Submission	03.02.2020 at 03.00 pm
8.	Date and Time of Tender opening	03.02.2020 at 04.00 pm



## **TENDER DOCUMENT**

Terms and condition for the Supply & Installation of Fuel Cell Work Station for Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Palkalai Nagar, Madurai – 625 021, as per Guidelines of Government of Tamil Nadu Tender Transparency Act for the purchase of equipment by Government Departments, Undertakings and Autonomous Bodies [April 1998]

### **1. DATE AND TIME**

Sealed Tenders, are invited by the Registrar, Madurai Kamaraj University under two cover system from the reputed manufacturing concerns or Original Equipment Manufacturer/ their regional Agents / Authorized dealers and suppliers for the supply and installation of Fuel Cell Work Station, as per specifications indicated in the Commercial bid.

The duly filled Tender forms containing the Technical Bid and Commercial Bid should reach **on or before 03.00 p.m of the date specified in the tender schedule**. Tenders received after due date and time will be summarily rejected.

**The EMD amount of 1% to total cost of equipment + GST (specified in page no. 1) should be enclosed in the Technical bid only.**

### **2. MODE OF DESPATCH**

Tenders should be addressed to the **Principal Investigator, DST project, Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Madurai - 625 021**, Tamil Nadu, India, by designation and should be only in sealed covers by Registered or Speed Post with Acknowledgement due or in person. Tenders received in ordinary covers without seal will not be considered.

### **3. SUPERScription**

The Tender should be sealed and superscripted as "Tender for Supply & Installation of Fuel Cell Work Station for Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Palkalai Nagar, Madurai – 625 021, Tamil Nadu, India due on **the date and time specified in the Tender schedule of this document**."

The Tender document relating to the Technical Bid duly filled in and signed must be put in sealed cover super scribed as **Technical Bid**". The Tender document relating to the Commercial Bid must be duly filled in and signed and must be put in a sealed cover separately, super scribed as **Commercial Bid**". The sealed Tender cover containing the Technical Bid **(with EMD)** and Commercial Bid should be sent to the, **"Principal Investigator, DST project, Department of Physical Chemistry, School of Chemistry, Madurai Kamaraj University, Palkalai Nagar, Madurai – 625 021, Tamil Nadu, India"**. Covers received without such superscription will be summarily rejected.

### **4. EARNEST MONEY DEPOSIT**

Each Tender should be accompanied by Earnest Money Deposit of E.M.D. of **Rs. /-(1% to total cost of equipment + GST)** by Demand Draft drawn in favour of PI, DST project, SOC, Madurai Kamaraj University, Madurai-625021. The Earnest Money Deposit of any unsuccessful tenderers will be returned after the acceptance of the successful tender, at the expenses of the Tenderers within a reasonable time consistent with the rules and regulation on this behalf.

The above **EARNEST MONEY DEPOSIT** amount held by the University till it is returned to the Tenderers would not earn any interest there for. Earnest Money Deposit of the successful Tenderer may be adjusted towards security deposit for the successful tenderer.

## **5. ELIGIBILITY CRITERIA**

The bidders must fulfil the following Eligibility conditions and also submit documentary evidence in support of fulfilling these conditions while submitting the Technical Bid. The University will consider the Commercial Bid of the vendors who qualify in the Technical bid. For those vendors who are not qualified in the Technical Bid, the Commercial bid will not be considered. The bidder should have the record of i) installations at reputed institutions / organizations, ii) sufficient service back-up in Tamil Nadu / South India for all types of related works. iii) The Tenderer should submit the latest **Income Tax and Commercial Tax Clearance certificates**. iv) The bidder should have at least three years' experience and focus on related business, as on **31-12-2019** and v) a minimum average annual turnover 10 times the approximate cost of the quote value of the items to be purchased in the last three years.

## **6. DETAILS TO BE FURNISHED AND MODE OF PRESENTATION**

The Tender should contain particulars like name and addresses of the Tenderers, net rate including excise duty, custom duty\* (for imported item, clearing and forwarding charges, surcharge, GST, freight, octroi, insurance for delivery, delivering up to the point, installation and commissioning of the equipment and such other levies that may be applicable.

- a. The rates should be kept firm for "**Ninety**" days from the date of the opening of the Tenders for acceptance.
- b. The rate should be quoted for each item with specification and model if applicable and should be indicated clearly both in words and figures. Any **scoring or overwriting** should be attested by the Tenderer with full signature. The rate quoted should be firm and **should not be subject** to any variation clauses.
- c. **The University shall not pay any increase in duties, taxes** and surcharges on account of any revision by the Government at the time of supply and installation.
- d. Supply of the equipment and other accessories shall be as per the specifications mentioned in the corresponding Appendixes and according to the delivery and installation schedule indicated.

## **7. OPENING OF TENDERS:-**

The tenders received up to 03.00 p.m. on the date specified in the Tender Schedule will be opened by the Registrar, or any other officer authorized by Technical/Purchase committee at 04.00 pm on the same day in the presence of those Tenderers or their representatives who may be present at the time of opening. The representatives of the Tendering firm who are attending the opening of the Tenders should bring a letter of authority from the Tendering firms which they represent to identify their bonafide.

## **8. AGREEMENT:-**

- a. The successful tenderer should execute an agreement for the fulfillment of the contract in the stamp paper in the model form enclosed in Appendix, within fifteen days from the date of acceptance of the tender.
- b. The expenses incidental to the executing of agreement shall be borne by the successful Tenderer.
- c. The conditions stipulated in the agreement form should be strictly adhered to and violation of any of the conditions will entail termination of the contract without prejudice to the rights of the University and recovery of any consequential loss from the successful Tenderer.

## **9. SECURITY DEPOSIT:**

- a. The successful Tenderer will be required to remit the **Security Deposit** equivalent to **Five percent** of the value of the Purchase order within **fifteen days** from the date of receipt of communication/ intimating them of the acceptance of the Tenders. If the accepted Tenderer fails to remit the Security Deposit within the above said period, the Earnest Money Deposit remitted by him will be forfeited to the Madurai Kamaraj University and his Tender will be held void. Purchase order will be released after execution of the above contract by the successful Tenderer and after remitting the Security Deposit by way of Demand Draft / Bankers' cheque / irrevocable bank guarantee drawn in favour **PI, DST project, SOC, Madurai Kamaraj University,**

**Madurai- 625021, Tamil Nadu.**

- b. The Security Deposit furnished by the Tenderer in respect of his Tender will be returned to him at the **End of the warranty period** (four years) subject to the satisfaction of the University.
- c. In case of successful Tenderer, The Earnest Money Deposit, if paid, may be adjusted towards Security Deposit the Tenderer remitted, if opted by the Tenderer.
- d. If the Tenderer fails to act according to the Tender or backs out when his Tender is accepted, his Security Deposit mentioned above will be forfeited to the University.

**10. SUPPLY AND INSTALLATION OF EQUIPMENTS**

- a. The supply and installation of equipment/item and other accessories should be made strictly in accordance with the specifications given in the Commercial Bid and should successfully fulfill the tests carried out by the University. The supply and installation should be as per the delivery schedule to be sent by the University along with the placement of firm orders. The successful Tenderer should give guarantee for a period of **four-years** for the equipment and other accessories installed, against breakage or breakdowns due to manufacturing defects. The guarantee period takes effect from the date of satisfactory trial run. The Tenderer shall be liable to make good the loss by replacing the equipment or other accessories found defective during the guarantee period. The equipment hardware should be installed in the premises of the University at the cost and risk of the Tenderer.
- b. The material or goods are to be guaranteed for a period of at least three-years after installation and commissioning against manufacturing defect and bad workmanship. The warranty period specified, will commence from the date of handing over the equipment after running and carrying out successfully the tests prescribed by the University to its satisfaction.
- c. Documents such as operation manuals, software, user manuals and circuit diagrams and other relevant materials shall be provided by the Tenderer along with equipment, free of cost.
- d. If the supply, installation and commissioning of the systems are not effected before the specified period from the date of purchase order, the University shall have the authority to cancel the order and to take any such action which will be deemed fit in the circumstances.
- e. If any manufacturing or other technical defects are found within the specified months from the date of installation, commissioning and handing over the system to the University Authorities, the same will have to be rectified or replaced free of cost by the supplier.
- f. During the warranty period, if due to manufacturing and other technical defects of the equipment supplied, the system is down and if it is not restored in working condition within 48 hours, the supplier shall be liable for a penalty of one percent per week during breakdown period on the total contract price.
- g. The warranty will cover all the materials and goods supplied by the supplier under this contract irrespective of the fact whether these have been manufactured by the supplier or not.
- h. In case of failure by the Tenderer to deliver goods or materials demanded from them within the period specified for delivery or in case of goods or materials being delivered without a correct invoice in duplicate, the Registrar or anyone duly authorized by him shall have power to reject any such goods or materials so rejected or not delivered unless the supplier shall themselves forthwith supply others that shall be sufficient and satisfactory and any excess of cost so incurred by the Tenderer over the contract price together with all charges and expenses attending the purchase shall be recoverable by the University from the supplier.
- i. The successful Tenderer shall supply licensed versions of the equipment systems. The University will not be held responsible for any consequences arising of patent right problems.
- j. The equipment should be demonstrated to the representatives of the Specifications Committee before shipment is effected.

#### **11. PAYMENT OF COSTS:**

The terms of payments for purchase of equipment: The total cost of equipment will be paid on installation, commissioning and handing over of the Equipment after testing all the software and fulfilling the technical specifications and also after the submission / payment of security Deposit (5% of the equipment cost. Also could be submitted in the form of Bank Guarantee). The testing that should be carried out for commissioning the material supplied and the satisfactory working of the systems are to be certified by the University.

In case of payment to OMs outside the country, wire transfer mode payment would be made upon the submission / payment of security Deposit (5% of the equipment cost; also could be submitted in the form of Bank Guarantee).

#### **12. FORFEITURE OF EARNEST MONEYDEPOSIT:**

If the accepted Tenderer fails to act according to the tender conditions or backs out after his tender has been accepted, his Earnest Money Deposit will be forfeited to the University.

The successful Tenderer shall not assign or make over the contract, the benefit of burden thereof to any other person or persons or body corporate. He shall not underlet or sublet to any person/s or body corporate for executing the contract or any part thereof.

#### **13. PENALTY FOR NON-FULFILMENT OFTENDER:**

Penalty will be levied at the rate of 1% per week on the total contract price if the installation and commissioning has not been completed in full within the stipulated period subject to force majeure conditions. Besides, such performance may entail black listing of the supplier.

#### **14. ACCEPTANCE AND WITHDRAWALS:**

The final acceptance of the tender is entirely vested with **University which reserves the right to accept or reject** any or all the tender without assigning any reason whatsoever. There is no obligation on the part of the University to communicate with rejected Tenderers. After acceptance of the tender by the University, the Tenderer shall have no right to withdraw his Tender or claim higher price. Tenders with incomplete Information will be summarily rejected.

#### **15. POST WARRANTY:**

The post warranty annual maintenance charges (AMC) is applicable for the remaining period after the satisfactory completion of the warranty period offered by the vendor. The annual maintenance charges should be indicated.

The AMC payable from the date of completion of warranty in advance against invoices/bill to be preferred by the vendor. The vendor agrees to provide comprehensive maintenance of the equipment, which shall include preventive maintenance and corrective maintenance at the location specified by the University. The maintenance shall also include replacement of all parts of equipment. The equipment which is down should be restored in good working condition within 48 hours. Otherwise the supplier shall be liable for a penalty of 1% per week of the breakdown period on the total price of the system. The University reserves the right to terminate the maintenance contract in the event of unsatisfactory maintenance and claim damages for non- fulfillment of contract.

#### **16. PENALTY FOR FULFILLMENT OFCONDITIONS**

The supplier agrees that in the event of non-fulfillment or non-observance of any of the conditions stipulated in the conditions, the Supplier shall pay as penalty an amount equivalent to 10% (ten) percent of total value of equipment or an amount equal to the actual loss incurred by the purchaser whichever is greater. This provision applies up to the end of the life cycle of the equipment (i.e.) even during the post warranty period.

#### **17. EXEMPTION OF CUSTOMS DUTY AND EXISEDUTY**

The Madurai Kamaraj University, being a Research oriented higher education institution, is exempted from paying Excise duty and Customs duty / Concessional Customs Duty. The supplier shall therefore obtain Exemption Certificate from the University, issued by the Government of India, before clearing the consignment.

## **18. TIME-SCHEDULE**

Time-schedule is mandatory. Supply should be made within 45 days for any purchase. If not supplied or part only is supplied, then concurrence for purchase from L2 to be got from L1. If no concurrence is given by L1, then notice to be issued and after 15 days L2 is called and negotiated for the supply at L1 rate, or at a lesser price originally quoted by L2. University is vested with the power of modifying the quantity, time and alteration in the specification without hindering the requirements. Those who are agreeable for the above terms should only apply for the tender.

## **19. GENERAL**

**The tenderers while sending their tender should enclose a copy of the conditions stipulated duly certified and attested by them in token of accepting the tender conditions that they understood and accepted them in full. Tenders received without the certified copy of the conditions shall be rejected summarily.**

I / We \_\_\_\_\_ have gone through the terms and conditions and will abide by them as laid down above.

**SIGNATURE OF THE TENDERER WITH OFFICE SEAL**

#### **OTHER APPLICABLE GENERAL CONDITIONS:**

1. The quotation must specify the period within which the supply could be effected from the date of receipt firm orders.
2. The prices quoted should clearly specify charges for delivery of the goods to destination indicated overleaf.
3. Sales tax or any other taxes/GST if applicable should be shown separately giving the full rate of taxes for each items giving ex-incidence of such levies.
4. If the rates are under D.G.S. & D. please specify the same clearly enclosing necessary documents.
5. **The leaflets/ catalogue, etc. of the technical features of the offered equipment must be submitted for proper evaluation and would be considered for technical evaluation.**
6. Dealership certificate on the offered products must be included in case the vendor is a dealer.
7. The vendor must have credential in supplying such system in any institute of national importance and similar organizations
8. Bidder should have valid Service Tax registration number, GST number and meet all legal requirements.
9. Any amendment / corrigendum to the RFP (Request for proposed) document shall be posted on the University Website
10. MKU University reserves the right to call for any other details or information from any of the Bidders. Moreover, the University reserves all rights to reject any bid at any time, at any stage, fully or partly for whole process and / or for particular bidder and also reserves all rights at any time to add, alter, modify, change, edit & delete any condition at any stage. MKU also reserves the right to cancel the entire tender process without assigning any reason. In this regard, the decision of University shall be final and binding on all the participant.
11. Every page of the RFP document shall be signed by the bidder or by a person duly authorized by the bidder.
12. Bidder shall submit letter of authorization, authorizing the person signing the RFP document on behalf of the bidder.
13. All changes, alterations, corrections in the RFP document shall be signed in full by the person(s) signing the RFP document, with date. No eraser and/or over writing without authentications is/are permissible.
14. The complete RFP document along with the documentary evidence should be numbered.
15. The bidder shall carefully examine and understand the scope of work, specifications/conditions of RFP and seek written clarifications, if required, to ensure that they have understood all scope of work, specifications/conditions of RFP.
16. If the bidder have NSIC certification they will get the NSIC benefits.
17. If the bidder, after submission, revokes his bid or modifies the terms and conditions thereof during the validity of his bid except where the University has given opportunity to do so, the earnest money deposit submitted by Bidder shall, in such case, be forfeited.
18. The successful bidder i.e. Service Provider, within 15 days of receipt of Letter of Intent or within such extended time as may be allowed by University in its discretion, shall submit a Performance Bank Guarantee for an amount equal to 5% of the contract value having validity of 48 months. In case of extension of maintenance contract, the Service Provider shall submit a fresh Bank Guarantee for the Contract value covering the extended period of AMC.



**APPENDIX I**

**TECHNICAL BID**

**MADURAI KAMARAJ UNIVERSITY, MADURAI – 625 021**

Tender Schedule for the Supply & Installation of.....at Department of Physical Chemistry, Madurai Kamaraj University, Madurai – 625 021.

**Profile of the Company:**

**The Company should provide the following details**

1. Name of the Organization	
2. Nature of the Organization (Govt. / Public / Private / Partnership /Proprietorship)	
3. (a) Address of the Registered Office of the firm with Phone Number, Cell No, Fax and E- mail.  (b) Year of Establishment (related to Printers business)  (c) TNGST & CST Registration No. / GST No.  (d) If approved small scale	
4. Annual turnover for the previous three years as on 30-12-2019  I. General:  II. Equipment listed in tender Document	
5. Location of the factory with address	
6. Maintenance and service center facilities in Madurai city / other areas and total number of Service Engineers available:	
7. Names of the Government Agencies / Educational Institutions to whom similar Machines have been supplied in the preceding Three year	
8. Total experience in the related areas	
9. Is your Company an original manufacturer of the equipment and related items?	

If yes, state the specific items you Manufacture			
10. What type of maintenance support does your company provide for the spares			
11. What are your conditions for up gradation of Equipment system after the warranty period?			
12. In case of breakdown of the equipment, What will be the mean Downtime? And state whether standby systems will be provided			
13. State the minimum amount of time required to supply the items if you company/Organization gets the order			
14. State whether you will agree to supply the manuals Drivers for items supplied.			
<b>15. EMD PAYMENT PARTICULARS</b>			
<b>[The DD should be enclosed in the Technical Bid only]</b>			
(1) Demand draft particulars			
Sl. No	Name of the bank and Branch	DD No. and Date	Amount Rs.

Signature :

Name of the Firm :

Phone / Mobile No. :

**APPENDIX II**  
**COMMERCIAL BID**

**Madurai Kamaraj University, Madurai – 625 021**

Tender Schedule for the Supply & Installation of .....as per specifications below for the use in **Fuel Cell Work Station** for Department of Physical Chemistry, Madurai Kamaraj University, Palkalai Nagar, Madurai – 625 021, Tamil Nadu

Sl.	Description/Specification	Qty	Rate Rs.	Total (Inclusive of Taxes) Rs.
1.	1.  2.  3.  4.  5.			

Warranty Period should be clearly mentioned ..... Years.

1. Please indicate the Annual Maintenance Charges per annum on the basic price of Equipment, excise duty, sales tax, etc., year wise for the remaining period of 5 years life cycle after warranty period.
2. Indicate the location of service center, address with phone / fax numbers.
3. Indicate No. of Service Engineers available.
4. Minimum Time required for contact and Service

Signature :

Name of the Firm :

Phone / Mobile No. :

## **Technical Specifications for Fuel Cell Work Station Equipment**

Fuel cell test station should be capable of testing electrochemical (fuel cell) performances of fabricated Membrane Electrode Assembly (MEA) with the in-situ controlled humidity, temperature and gas and or liquid flow. Fuel cell test station should be integrated with AC Impedance measurement facility to evaluate the internal cell resistance of a fabricated system. Fuel cell work station system should be useful to evaluate the Direct Methanol Fuel Cell (DMFC) and Proton Exchange Membrane Fuel Cell (PEMFC) performances.

### **Hardware Specifications:**

#### **Electronic Load:**

- Maximum Load Current : 0-250 A
- Maximum Load Power : 600 Watts
- Maximum load current should be able to draw at near zero cell voltage

#### **Potential Measurement:**

- Maximum Voltage : 0-60 V
- Potential Resolution : 100  $\mu$ V
- Low Range Accuracy : < 0.1 %
- High Range Accuracy : < 0.1%

#### **Impedance:**

- Integrated AC-Impedance measurement facility
- Frequency range : 100  $\mu$ Hz to 10 kHz

#### **Humidification:**

- Humidifiers for anode and cathode with accurate control for the operation of the cell at various humidity levels
- Temperature range: Ambient Temperature to 90 °C
- Humidification with automatic fill option

#### **Temperature change Humidification system:**

- Temperature range : Ambient temperature - 200 °C
- Cell temperature should be displayed on the device and laptop
- Cell temperature should be controlled through software
- Alarm or indicators should be provided to specify the overheating

#### **Mass Flow Controller:**

- Digital Mass Flow Controller Systems
- Flow rate : Anode (1000 sccm) and Cathode (5000 sccm) w/flow-tracking

#### **MLP Pump:**

- Peristaltic Pump (computer controlled with auto-flow) should be provided for DMFC applications
- Flow rate of reactants should be tuned with a software

#### **Cell Hardware:**

- 5 Sq.cm fuel cell - Cell hardware should be included with a main system

**System Pressure:**

- Provision for back-pressure up to 2 bar for anode and cathode

**Safety Features:**

- Safety features at the conditions of under voltage, over voltage, over temperature, loss of reactant or purge gas pressure, low water, leakage, communication failure etc.,
- Hydrogen and carbon related oxides sensors with alarms

**Software Features:**

- Software system should support the items including DC Electronic Load, Gas flow control, Gas Humidification, Cell Temperature control, Cell back pressure control, Large cell cooling, Reference electrode monitoring, Single cell monitoring and testing programs and automated testing

**Software Techniques:**

- Open circuit voltage, Current scan, Voltage scan, Potential EIS, Constant load discharge, Constant voltage discharge, VIR-Polarization testing program, VIR-MR-Multiple range VIR, Life time program, Drive Cycle, Set protocol measurement, Run protocol measurement and AC Impedance measurement
- Pre-heater to avoid condensation, set temperature through software
- Labview based software for easy customization

**Laptop Computer:**

- Display: 15.6-inch HD (1366x768) display, Processor: 9<sup>th</sup> Gen Intel Core i7 Processor, CPU Speed: Above 2.5 Hz, Memory: 16 GB RAM, Storage: 1 TB + SSD, Optical Drive Type: DVD-RW, Operating System: Pre-loaded Windows 10 Home with lifetime validity, Pre-installed Software: Original windows 10 Home office

**Warranty:**

- 4 Years Free Warranty
- After the warranty period, quality service should be provided for AMC Charges

**Service Availability:**

- Nearby service centres should be specified

**Training:**

- Training should be provided to the students and staffs

**Up-gradation Features:**

- System should be upgraded for Solid Oxide fuel cell applications
- Automatic Back pressure System, 0-60 psi, Anode and Cathode