INTER UNIVERSITY INSTRUMENTATION CENTRE
MAHATMA GANDHI UNIVERSITY

SHORT TENDER NOTICE FOR PURCHASE OF SCIENTIFIC EQUIPMENTS

TENDER NOTICE No: IUIC/MGU/T-2/2022 *Date: 31/01/2022*

Competitive tender in sealed cover for the supply of **Scientific Equipments** are invited from reputed firms and authorized dealers so as to reach the office of the undersigned not later than 12.00 pm on 10/02/2022. Technical bid of the tenders will be opened on 10/02/2022 at 2.30 pm in the presence of authorized representatives of tendered firms. The financial bid of the Tender will be opened on 10/02/2022 at 3:30 pm

Sl. no	Scheduled Item	Specification	Qty	E.M.D (Rs.)	Tender Fees (Rs.)
1	UV reactor and accessories	Large Quartz Double walled immersion well for holding lamp with B/70 cone joint and having inlet / outlet for water cooling. 150mL Borosilicate Reaction Flask with B/70 socket joint and having inlet for sample introduction and outlet for the sample withdrawal and a flat bottom. UV Chamber for the above set up with viewing window and leak proof door. Lamp source for UVA, UVB and Visible-near IR region. 400W UV Lamp with mounting and 400W Power Supply. 250W UV Lamp with mounting and 250W Power Supply. 125W UV Lamp with mounting and 125W Power Supply. Provision for keeping magnetic stirrer and taking power cord outside the chamber for plugging Spares for uninterrupted functioning for one year should be provided.	1	2.5% of the item	1000+GST
2	Solar Simulator	Artificial Solar Simulator with 400W Lamp having wavelength 300-1100 nm (minimum 1500 hours usage) An inbuilt chamber with Power Supply, and see-through window Provision for keeping a magnetic stirrer	1	2.5% of the item	1000+GST

		Sample tray and cooling fan Spares for uninterrupted functioning for one year should be provided.			
3	Spin Coater	RPM Range: 50 – 12000 Acceleration capability: 8000 rpm/sec Program storage facility: Store the programs internally or externally (Internal Memory minimum 16 GB, External Memory a Pen Drive) Total duration of a complete program (with 10 steps): 800-1200 seconds Accuracy:< +or - 1% rpm Vacuum based chucks for holding silicon wafers, Microscopic glass slide and Cover Slip. Vacuum pump -600mm Hg dry Pumping speed :45 L/min Oil-free Diaphragm Vacuum Pump Spares for uninterrupted functioning for one year should be provided.	1	2.5% of the item	1000+GST
4	Pyranometer Sensor with Data Logger	The Sensor should measure the short wave radiation between 300 to 1100 nanometers. Measurement in watts/m² Range 0 – 1000W/m² Sun light Waterproof, submersible, designed for continuous outdoor use. Storage up to 99 measurements, by using the software provided. Data should be transferable to a PC. Improved Self Cleaning Design & Cosine Correction with domed diffusion head. Rugged Anodized Aluminum Housing Cable Length: 10 meter. Sensor Dimensions: 20-30mm and diameter 25-30mm tall Display: 4 digits LCD Display, Battery: 3 V coin cell for display. Spares for uninterrupted functioning for one year should be provided.	1	2.5% of the item	1000+GST
5	Probe for temperature and humidity measurement	Temperature / Relative Humidity Loggers: (-25 to +85°C; 0 to 100% RH) Total Reading Capacity: 32,000 readings Memory type : Non Volatile Trigger Start : Magnetic Switch Delayed Start: Relative / Absolute (up to 45 days) Stop Options : When full after n Readings never (overwrite oldest data) Reading Types: Actual, Min, Max Logging Interval: 1 sec to 10 days Offload While stopped or when logging in minutes mode	1	2.5% of the item	1000+GST

		Alarms 2 fully programmable; latch able. Reading Specification Temperature: Reading Range: -25°C to +85°C (-13°F to +185°F) Sensor Type:10K NTC Thermistor (Internally mounted) Response Time: 25 minutes to 90% FSD in moving air Reading Resolution: 0.01°C or better Relative Humidity Reading Range: 0% to 100% RH Sensor Type: Capacitive Accuracy: ±3.0% RH at 25°C / 77°F Reading Resolution: Better than 0.3% RH Sensor Location: Externally mounted Response Time: 40 seconds to 90% FSD (current Data loggers, using software. Spares for uninterrupted functioning for one year should be provided.			
6	Digital Light Meter for light intensity measurement (Lux meter)	Measurement Parameter Range : 20, 200, 2000, 20000, 200000 Lux/ 20, 200,2000,20000FC (footcandle) Precision : ±3% calibrated by the common incandescent lamp. ±6% for other visible light sources Cosine error:30°±2%, 60°±6% 80 °±25 % Cosine angle corrected according to the grade A general specifications of JIS C 1609:1993 and CNS 5119 A Sampling Rate: 2.5 times/second for the digital display Display: 3½ digit 1999-point LCD screen Sensor: Silicon photoelectric diode and optical filter Battery Life: 200 hours Warranty: 1 year Spares for uninterrupted functioning for one year should be provided.	1	2.5% of the item	1000+GST
7	Probe for water quality measurement	Waterproof pH/Conductivity/TDS/Salinity/Temp Tester with ATC Std-Buffer Solutions (480 ml Per Bottle) pH 4.01 Buffer Solution-1 pH 7.00 Buffer Solution-1 1413 µS/cm KCl Con. Calibration Solution-1 500 µS/cm KCl Con. Calibration Solution-1 300 ppm 442 TDS Calibration Solution-1 1000 ppm TDS 442 Calibration Solution-1	1	2.5% of the item	1000+GST

		25 ppt salinity standard NaCl Calibration Solution -1 45 ppt salinity standard NaCl Calibration Solution- 1			
8	Vane anemometer	Wind speed measurement Range: 0.40 to 25.00 m/s 80 to 4900 ft/m Resolution: 0.01 m/s 1 ft/m Accuracy: ±2 % of full scale ±2 % of full scale Air flow measurement Range: 0.01 to 99.99 m3/s, 1 to 9999 ft3/m Resolution: 1 Accuracy: 0 to 9.999 ft2 Wind temperature measurement Range: 0 °C to 50 °C Resolution: 0.1 °C Accuracy: ±0.8 °C Product specification Display: Dual-screen 4 digit (9999 points) LCD screen Measurement unit: Wind speed- ft/m; m/s Air flow: CMS (m3/s) and CFM (ft3/m), (cubic foot/minute) Wind temperature: °C and °F Data holding: Lock the displayed readings Sensor: Wind speed/air flow sensor, conventional angular vane arm, lubricating ball bearing Wind temperature sensor, precision Thermistor Minimum/maximum value storage, recording and viewing the minimum reading and maximum reading Average reading storage: Single point (2 hours at most) or multiple points (8 readings at most) Auto power-off: Enter the sleep mode after 20 minutes (can be disabled) to save power Power supply: 9V battery (high capacity alkaline battery) Battery life: 100 hours Dimensions: 181 × 71 × 38 mm Sensor head diameter: 70 mm	1	2.5% of the item	1000+GST
9	Multi Gas Monitor with data logger &	Multi Gas Monitor with data logger &USB Computer interface (Approved by CMRI (CIMFR))	1	2.5% of the item	1000+GST

	USB Computer interface	Gas- Sensor Range- Resolution H_2S - EC :0-500 ppm- 1 ppm CH_4- Catalytic: 0-100 % LEL- 1 % LEL NH_3 – EC: 0-500 ppm- 1ppm Specifications : Accuracy: +/-2%. Display : 128 x64 Graphics Display Sampling : Auto Suction Through Inbuilt Pump Power Supply : Rechargeable Lithium Battery Response Time: 30 seconds at 95% variation. Operating Temperature: -10 to 55 degree Celsius Data Logger USB computer Interface Sampling Tube Sampling Probe. Display : Liquid Crystal Display(LCD) Battery : 3.7V/1500Ma Continuous working time : ≥13hours Dust and water resistance : IP67 Accessories Battery Charger, Sampling Tube, Calibration Certificate , Warranty Certificate			

Sd/-

Hon. Director
Inter University Instrumentation Centre
M. G. University, Kottayam

NOTE:

(1) PLEASE SEE THE ANNEXURES I, ANNEXURE II, ANNEXURE III and ANNEXURE IV ATTACHED BELOW

(2) ALL THE DOCUMENTS RELATED TO THE TENDER CAN BE DOWNLOADED FROM THE UNIVERSITY WEBSITE- www.mgu.ac.in, in the section “Quotation/tender”.

ANNEXURE I

General Terms and Conditions

- The main envelop should be super scribed: "Tender for **Scientific Equipments**
- The non refundable application fee of accompanied with tender for each item. The application fee must b e as D.D. drawn in favour of Finance officer, M.G. University.

- Tenders must accompany a copy of the "General Terms and Conditions, Annexure I and Annexure II and III" section of this document, signed and stamped on each page indicating that they agree to these.

- Last date of submission of tender along with requisite fee, EMD and all documents is on 10/02/2022 **(**not later than 12.00 pm**)**. The DD for EMD or any other accepted document must be drawn in of favour of Hon. Director, Inter University Instrumentation Centre, M. G. University, Kottayam, Kerala payable at SBI Mahatma Gandhi University Campus Branch.

- All other charges including GST/CST, Excise Duty and other levies payable by C.I.P should be clearly indicated otherwise it will be presumed that the rates quoted are inclusive of all these charges and will not be paid.

- The Excise Duty component (with percentage) should be indicated, as the University is exempted from the payment of Custom/Excise Duty. Exemption will be availed by providing Custom/Excise Duty Exemption Certificate with order.

- The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid. The charges for extended warranty and/or Annual Maintenance Contract after the expiry of offered warranty period should also be specified in the financial bid.

- The manufacturers' printed literature/catalogue/drawing/user's list in respect of range of product being quoted should also be submitted with the offer.

- Our Institute is registered with the Department of Scientific & Industrial Research (DSIR), so Excise duty exemption will be provided.

Other requirements for delivery and complete installation

- Delivery at Inter University Instrumentation Centre, Mahatma Gandhi University, Kottayam
- All other requirements for satisfactory installation of Software.
- It will be the responsibility of the supplier to deliver the ordered materials at the respective laboratory of Inter University Instrumentation Centre, Mahatma Gandhi University, Kottayam.
- All required materials for satisfactory installation are to be provided by the supplier at their own cost.

ANNEXURE II:

TENDER FORM PART-I (TECHNICAL BID)

PART-I (TECHNICAL BID) OF TENDER NO:

Last date for receipt:

Due date for opening Part –I (TECHNICAL BID):

Tenderer's Offer No:

Date:

From,

M/s. ……

……

To,

The Hon.Director, IUIC
Inter University Instrumentation Centre,
M. G. University,
Kottayam, Kerala,India

Dear Sir,

I/We have gone through the tendering conditions pertaining to the Tender and General Terms and Conditions of Contract and other requirement for delivery and complete Installation and Special Conditions of Contract contained herein with this tender document. I/we hereby agree to supply the stores conforming to the tender specifications incorporated in ANNEXURE I of the tender document and also agree to abide by your General Conditions of all Contracts and Special Conditions of Contract contained in the ANNEXURE I of the Tender document.

You will be at liberty to accept any or more of the items of stores offered by us and I/we shall be bound to supply you the stores as may be specified in the Purchase Order/Contract. I/We hereby agree to keep the price valid for your acceptance for a period of 30 days from the date of opening of Part-II (Financial bid) of the tender

I/We are also enclosing herewith all the leaflets catalogue etc. pertaining to the stores offered.

Yours faithfully

Stamp and Signature of the Tenderer

ANNEXURE III

TENDER FORM PART-II (FINANCIAL BID)

PART-II (FINANCIAL BID) OF TENDER NO:

Last date for receipt:

Due date for opening Part –II (FINANCIAL BID):

Tenderer's Offer No:

Date:

From,

M/s.

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To,

The Hon. Director, IUIC
Inter University Instrumentation Centre,
M. G. University,
Kottayam, Kerala, India

Dear Sir,

In response to your invitation and as per your tendering and contracting conditions, the prices applicable for the scope of supply contained in ANNEXURE-I (TECHNICAL BID) of our tender are indicated in the format at annexure "A" to this tender.

We hereby agree to keep the price valid for your acceptance for a period of 30 days from the date of actual opening of Part-II (FINANCIAL BID) of the tender.

Yours faithfully,

Stamp and Signature of the Tenderer

ANNEXURE IV

Sl. no	Scheduled Item	Specification
1	UV reactor and accessories	Large Quartz Double walled immersion well for holding lamp with B/70 cone joint and having inlet / outlet for water cooling. 150mL Borosilicate Reaction Flask with B/70 socket joint and having inlet for sample introduction and outlet for the sample withdrawal and a flat bottom. UV Chamber for the above set up with viewing window and leak proof door. Lamp source for UVA, UVB and Visible-near IR region. 400W UV Lamp with mounting and 400W Power Supply. 250W UV Lamp with mounting and 250W Power Supply. 125W UV Lamp with mounting and 125W Power Supply. Provision for keeping magnetic stirrer and taking power cord outside the chamber for plugging Spares for uninterrupted functioning for one year should be provided.
2	Solar Simulator	Artificial Solar Simulator with 400W Lamp having wavelength 300-1100 nm (minimum 1500 hours usage) An inbuilt chamber with Power Supply, and see-through window Provision for keeping a magnetic stirrer Sample tray and cooling fan Spares for uninterrupted functioning for one year should be provided.
3	Spin Coater	RPM Range: 50 – 12000 Acceleration capability: 8000 rpm/sec Program storage facility: Store the programs internally or externally (Internal Memory minimum 16 GB, External Memory a Pen Drive) Total duration of a complete program (with 10 steps): 800-1200 seconds Accuracy:< +or - 1% rpm Vacuum based chucks for holding silicon wafers, Microscopic glass slide and Cover Slip. Vacuum pump -600mm Hg dry

		Pumping speed :45 L/min Oil-free Diaphragm Vacuum Pump Spares for uninterrupted functioning for one year should be provided.
4	Pyranometer Sensor with Data Logger	The Sensor should measure the short wave radiation between 300 to 1100 nanometers. Measurement in watts/m² Range 0 – 1000W/m² Sun light Waterproof, submersible, designed for continuous outdoor use. Storage up to 99 measurements, by using the software provided. Data should be transferable to a PC. Improved Self Cleaning Design & Cosine Correction with domed diffusion head. Rugged Anodized Aluminum Housing Cable Length: 10 meter. Sensor Dimensions: 20-30mm and diameter 25-30mm tall Display: 4 digits LCD Display, Battery: 3 V coin cell for display. Spares for uninterrupted functioning for one year should be provided.
5	Probe for temperature and humidity measurement	Temperature / Relative Humidity Loggers: (-25 to +85°C; 0 to 100% RH) Total Reading Capacity: 32,000 readings Memory type : Non Volatile Trigger Start : Magnetic Switch Delayed Start: Relative / Absolute (up to 45 days) Stop Options : When full after n Readings never (overwrite oldest data) Reading Types: Actual, Min, Max Logging Interval: 1 sec to 10 days Offload While stopped or when logging in minutes mode Alarms 2 fully programmable; latch able. Reading Specification Temperature: Reading Range: -25°C to +85°C (-13°F to +185°F) Sensor Type:10K NTC Thermistor (Internally mounted) Response Time: 25 minutes to 90% FSD in moving air Reading Resolution: 0.01°C or better Relative Humidity Reading Range: 0% to 100% RH

		Sensor Type: Capacitive Accuracy: ±3.0% RH at 25°C / 77°F Reading Resolution: Better than 0.3% RH Sensor Location: Externally mounted Response Time: 40 seconds to 90% FSD (current Data loggers, using software. Spares for uninterrupted functioning for one year should be provided.
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		Wind speed measurement Range: 0.40 to 25.00 m/s, 80 to 4900 ft/m Resolution: 0.01 m/s 1 ft/m

8	Vane anemometer	Accuracy: ±2 % of full scale ±2 % of full scale Air flow measurement Range: 0.01 to 99.99 m3/s, 1 to 9999 ft3/m Resolution: 1 Accuracy: 0 to 9.999 ft2 Wind temperature measurement Range: 0 °C to 50 °C Resolution: 0.1 °C Accuracy: ±0.8 °C Product specification Display: Dual-screen 4 digit (9999 points) LCD screen Measurement unit: Wind speed- ft/m; m/s Air flow: CMS (m^3/s) and CFM (ft^3/m), (cubic foot/minute) Wind temperature: °C and °F Data holding: Lock the displayed readings Sensor: Wind speed/air flow sensor, conventional angular vane arm, lubricating ball bearing Wind temperature sensor, precision Thermistor Minimum/maximum value storage, recording and viewing the minimum reading and maximum reading Average reading storage: Single point (2 hours at most) or multiple points (8 readings at most) Auto power-off: Enter the sleep mode after 20 minutes (can be disabled) to save power Power supply: 9V battery (high capacity alkaline battery) Battery life: 100 hours Dimensions: 181 × 71 × 38 mm Sensor head diameter: 70 mm
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		Sampling : Auto Suction Through Inbuilt Pump Power Supply : Rechargeable Lithium Battery Response Time: 30 seconds at 95% variation. Operating Temperature: -10 to 55 degree Celsius Data Logger USB computer Interface Sampling Tube Sampling Probe. Display : Liquid Crystal Display(LCD) Battery : 3.7V/1500Ma Continuous working time : ≥13hours Dust and water resistance : IP67 Accessories Battery Charger, Sampling Tube, Calibration Certificate , Warranty Certificate

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