CENTRAL UNIVERSITY OF JHARKHAND CHERI-MANATU, RANCHI – 835 222



Tender Document For Supply and Installation of

Surface observatory along with automatic weather station

at

Central University of Jharkhand, Ranchi.

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<u>SECTION - I</u>

Date: 3rd March, 2022

NOTICE INVITING TENDER (NIT)

Subject: "Supply and installation of Surface observatory along with automatic weather station at Central University of Jharkhand, Ranchi"

- The Central University of Jharkhand (CUJ) invites <u>e-Tender</u> under Single Stage Two Envelops System (Two Bid System) through Central Public Procurement (CPP) Portal (<u>www.eprocure.gov.in</u>) / e-Procurement Portal of Ministry of Education, GOI (E-wizard) (<u>https://mhrd.euniwizarde.com/</u>) (Part-I: Technical bid and Part II: Financial Bid) from experienced and reputed firms/agencies/companies for "Supply and installation of Surface observatory along with automatic weather station at Central University of Jharkhand, Ranchi".
- 2. The interested bidders/ firms/ agencies/ companies can visit the university website www.cuj.ac.inor CPP portal <u>https://eprocure.gov.in/eprocure/app</u>or E-wizard (<u>https://mhrd.euniwizarde.com/</u>)regularly for more details about the closing date of submission of tender for any corrigendum/ addendum/ amendment. After closing date, any notice regarding tender will be publish on University website.
- 3. Tender document and other details can be obtained from <u>https://mhrd.euniwizarde.com</u>And <u>www.cuj.ac.in</u>CPP Portal web site: <u>www.eprocure.gov.in/epublish/app/epublish/app.</u> Registration with M/s ITI Ltd: - Intending bidders are requested to register themselves with M/s ITI Ltd(If not registered earlier) through <u>https://mhrd.euniwizarde.com</u>for obtaining user-id, by paying a Registration fee and online tender processing fee etc. Bidders are also required to obtain Digital Signature for participating in the e-tender.
- 4. E-Tender Processing Fee pay to "ITI LTD. Through e-payment gateway.
- 5. For participating in the e-Tendering process of Central University of Jharkhand (CUJ) the contractor shall have to get them registered on the site <u>https://mhrd.euniwizarde.com</u> by making required payment through only online payment mode so that they will get user ID and Password. This will enable them to access the website, <u>https://mhrd.euniwizarde.com</u> with the help of Digital Signature by which they can participate in e-Tender of Central University of Jharkhand (CUJ).

6. For this intending bidder may contact following e-Wizard Helpdesk numbers.

E-Wizard Helpdesk:

301-302, 3rd Floor, The Cloverleaf, Plot no.37, Sector-11, Dwarka, New Delhi - 110075 Tel: 011-49606060/8448288984/8448288981

PI DST-FIST & Head DEVS

SCHEDULE OF TENDER

Name of Works/Services	Supply and installation of Surface observatory along with automatic weather station at Central University of Jharkhand, Ranchi		
Type of Tender	Single Stage Two Envelops System (Two Bid System) (Rule 163 GFR 2017)		
Tender Fee	Rs. 2500.00 (Rupees Two Thousand Five Hundred Only)		
EMD	Bid Securing Declaration Form (Format VII)		
Mode of Tender Fee	The Bidders should send separate NEFT / Online Payment Transfer details for Tender Fee (non-refundable) to the account of "Central University of Jharkhand, Ranchi".CUJ, Ranchi Bank Details: -Name:Central University of Jharkhand A/C Type:Saving A/C No.:21525023720 IFSC No.:IDIB000B873 Bank/ Branch :Indian Bank (Allahabad Bank) Brambe Branch, Ranchi		
Publication of e-Tender	3 rd March, 2022 (1000Hrs)		
Last date and time for Submission of online tender documents	24 th March , 2022(1700Hrs)		
Date and time of Tender Opening 25 th March, 2022 (1100Hrs)			

<u>Note</u>: If the tender is not opened on the above date, due to unforeseen circumstances, then the next working day will be considered as tender opening date.

SECTION - II

INSTRUCTIONS TO BIDDERS

- 1. Tender document can be downloaded from the University Websitewww.cuj.ac.inor Central Public Procurement Portal (CPPP) at <u>https://eprocure.gov.in/eprocure/app</u> or e-Procurement Portal of Ministry of Education, GOI (E-wizard) (<u>https://mhrd.euniwizarde.com/</u>)
- 2. The bidders are requested to read the tender document carefully and ensure all the compliance with instructions herein. Non-compliance of the instructions contained in this document may disqualify the bidders from the tenderprocess.
- 3. All offers should be written in the English and price should be written in both, figures and words. The offer should be typed or written in pen ink or ball pen. Offer in **pencil will be ignored**.
- 4. The agencies/ bidders/ firms are advised to read carefully the tender documents and terms & conditions before quoting/ submitting their bid.
- 5. All the pages of the tender documents should be signed and stamped by bidders for their acceptance of all terms and conditions of the tender.
- 6. All offers should be written in the **English** and **price** should be written in both, **figures and words**.
- 7. Quoting firms **must put page number on every page** of the bid. It is also required that page nos. of the documents attached should be mentioned against each item of the mainbid.
- 8 The NEFT / Online Payment for Tender Feemust be deposited to the account of "Central University of Jharkhand, Ranchi"before the last date of bid submission.NEFT/ Online Payment transfer details for Tender Fee and Bid Securing Declaration Form must be submitted along with the tender document.
- 9. The Bids, for which Tender Fee and Bid Securing Declaration Form has been received before the last date of bid submission by the university, will be opened in the presence of Bidders' authorized representatives who choose to attend on the specified date and time. In the event of the date specified for bid receipt and opening being declared as a closed holiday for University, the due date for submission of bids and opening of bids will be next working day or as announced by the University in the appropriate manner.
- 10. Address and contact numbers for seeking clarifications & Communication: -

(a) Address for Communication:

- The Project Investigator (PI) **Department of Environmental Sciences** Central University of Jharkhand Village - Brambe P.O. – Brambe, P.S.-Mandar Dist.- Ranchi - 835 205 (Jharkhand)
- (b) Name/ designation of the contact personnel : Prof. Manoj Kumar, Head DEVS
- (c) Telephone/ Mobile numbers
- (d) E-mail ID of contact personnel

- : +91-9431901969
- : manoj.kumar@cuj.ac.in

SECTION – III

QUALIFICATION/ELIGIBILITY CRITERIA

- 1. The bidder must have experience in the area of Supply and installation of Surface observatory along with automatic weather station or similar type ofitem at Central/ State Government/Central or State Govt. funded Academic and Research &Development (R&D) Institute or University / Autonomous bodies/ Reputed Organisations/ Educational institute, for a minimum 03 successful supply & installation for a period of *lastFiveyears* ended 31st March, 2021. Surface observatory alongwith automatic weather station or similar type of items successfully supplied& installedatCentral/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University / Autonomous bodies/ Reputed Organisations/ Educational institute along with supply order value shall be furnished.Out of all successfully executed supply orders during last Five years, at least one successfully executed supply order shall be for any Central/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University / Autonomous bodies/ Reputed Organisations/ Educational institute along with supply order value shall be furnished.Out of all successfully executed supply orders during last Five years, at least one successfully executed supply order shall be for any Central/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University / Autonomous bodies.
- <u>Financial Capability</u>: Average annual financial turnover of the bidder during the last <u>three financial</u> <u>years ended 31st March, 2021</u> should be at least <u>Rs.1,00,0000.00 lakhs</u> (Rupees One Crore Fifty Lakhs only).
- 3. <u>Past Experience</u>: The bidder must have experience of *minimum 03successful Supply and installation* of **Surface observatory along with automatic weather station** or similar type of itemsfor a period of <u>last Five years ended 31st March 2021</u>toCentral/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University / Autonomous bodies/ Reputed Organisations/ Educational institute. Out of all successfully executed supply orders, at least one successfully executed supply order shall be for any Central/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University/ Autonomous bodies.
- 4. Self-Attested copies of registration certificate/ documents defining the constitution or legal status, place of registration and principal place of business; written power of attorney of the signatory of the bid to commit the bidder.
- 5. Self-Attested copy of following additional documents:-
 - (a) Firm Registration Certificate
 - (b) GST Registration Certificate
 - (c) PAN Card
 - (d) OEM Certificate, if applicable
 - (e) Authorised Dealership Certificateby/ of Indian firm
 - (f) Authorised service centre nearest to Ranchi.
- 6. Self-attested Copies of **at least 03 successfully completed supplyorders** with financial value for supply and installation of **Surface observatory along with automatic weather station** or similar type of items for last Five years alongwith names & address of clients who may be contacted for further information on those contracts (**Format-II**).
- 7. Income Tax returns filed for the last three financial years ended 31st March 2021.
- 8. Certified copies of Audited Annual accounts of the last three financial years ended 31st March 2021by CA comprising following :-

- (a) Balance sheet
- (b) Profit and loss Statement
- (c) Income and expenditure account
- 9. Bank Account details (NEFT Mandate Form) (Format-IV).
- 10. An undertaking on non-judicial stamp paper of **Rs. 100.00**to be furnished as per the **Format-V**of the tender document.

<u>Note:</u>Bidders not complying with above conditions or not providing complete information as described shall not be considered and hence out rightly rejected.

<u>SECTION – IV</u>

SCHEDULES OF REQUIREMENTS

Sl. No.	Item Name	Qty.
1.	Surface observatory along with automatic weather station	01 no.

<u>SECTION – V</u>

TECHNICAL SPECIFICATIONS

Technical Specifications for Surface observatory along with automatic weather station should have following minimum specifications (better & higher specification will be given preference)

Item No.: FIST 01	Technical Specifications for Surface observatory along with autom station should have following minimum specifications (bette specification will be given preference)	
Qty	01 No.	
Features	Specifications	
Instrument	Surface observatory along with automatic weather station	Quantity
		01
Surface observatory	1. Ordinary Rain Gauge FRP, Rain Gauge, non-recording 200 cm ² as per IS 5225-1992 with 4 Lts. Bottle & Over flow collector	01
	2. 20 MM Measure Glass Borosil	
	3. Stevenson Screen (Double) as IS 5948-1970 as per IS 5948-1970 made of Teak wood Angle Iron Stand	
	4. Maximum Thermometer as per IS 5681-1983	
	5. Minimum Thermometer as per IS 5681-1983	
	6. Dry Bulb Thermometer as per IS 5681-1983	
	7. Wet Bulb Thermometer as per IS 5681-1983	
	8. Grass Minimum Thermometer	
	9. Water Thermometer	
	10. Digital Lux Meter	
	11. Digital Infrared Thermometer	
	12. Open Pan Evaporimeter made of copper sheet with fixed Point	
	gauge still well, Measuring Tube, wood rack, Thermometer with Clip as per IS 5973/1998	
	13. Measuring Jar for O.P.	
	14. Wire Mesh for O.P.	
	15. Cup Counter Anemometer as per IS 5912/1970	
	16. Wind vane as per IS 5799/1970 with stand	
	17. Sunshine Recorder as per IS 7243/1974	
	18. Sunshine recorder cards (1 Year)	
	19. Soil Thermometer as per IS 6592-1972: 5 cm,	
	20. Soil Thermometer as per IS 6592-1972: 10 cm	
	21. Soil Thermometer as per IS 6592-1972: 15 cm	
	22. Soil Thermometer as per IS 6592-1972: 20 cm	
	23. Soil Thermometer as per IS 6592-1972: 30 cm	
	24. Iron Stand for Soil Thermometer	
	25. Automatic Self-recording rain gauge with quartz Clock	
	26. Soil Auger of Length 1 meter	
	27. Hygrograph with quartz clock	
	28. Thermograph with quartz clock (Bimetallic)	
	29. Old type Due Gauge	
	30. Hygrograph Charts	
	31. Thermograph Charts	
	32. Charts for Rain Gauge (SRRG) (1 set = 100 Nos.)	
	33. Muslin Cloth	
	34. Thread Ball (Muslin Thread)	
	35. Aneroid Barometer Indian (Analog)	
	36. Whirling Psychrometer (As Per IMD Specification)	
	37. Ordinary Thermometer (Sea Surface) for water	
	38. Bottle for Wet Bulb Thermometer39. FRP. Rain Gauge, non-recording 200cm, as per IS 5225-1992	

	40. with 4 Lts. Bottle & Over flow collector (ordinary Rain Gauge)41. 20 MM Measure Glass Borosil	
	42. Grass Minimum Thermometer	
Automatic weather	System should consist of Rain Gauge, Air Temperature,	01
station	Relative Humidity, Barometric Pressure, Soil Moisture & amp;	
Station	Temperature and Irradiance Sensor along with Data	
	Logging System. System will be installed in high	
	humidity area so should be able to withstand harsh	
	climatic condition. The entire system should be solar	
	powered.	
	Manufacturer Certificate Required from OEM	
	Temperature:	
	• Measurement Range: -40 to +70°C or better	
	• Accuracy: $\pm 0.4^{\circ}$ C (over the range -40 to +70°C) /	
	$\pm 0.3^{\circ}$ C (over the range -20°C to +60°C) or better	
	• Resolution: 0.001° C or better	
	Relative Humidity:	
	• Measurement Range: 0 – 100 %	
	• Accuracy: ±1.8% (at 25°C, over the range 0 to 80%	
	RH) / $\pm 3\%$ (at 25°C, over the range 80 to 100% RH) or	
	better	
	Barometric Pressure:	
	• Measurement Range: 600 – 1100 hPa or better	
	• Accuracy: ± 0.5 hPa (@ $\pm 20^{\circ}$ C) / ± 1.0 hPa (@ 0° C to	
	·	
	40° C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ -40°	
	C to $+60^{\circ}$ C or better	
	• Resolution: 0.01 hPa or better	
	Wind Speed & amp; Direction:	
	• IP Protection Rating 65	
	• Wind Speed:	
	• Measuring Range: 0-100 m/s or better	
	• Accuracy: <1% of measured value or better	
	• Resolution: 0.1m/s or better	
	• Wind Direction:	
	 Measuring Range: 0 to 360° 	
	• Accuracy: 3° or better	
	General Specifications:	
	• Starting Wind Speed :1 m/s. or better	
	 Survival Wind Speed: & gt;90m/s (324kph, 200mph) 	
	• Distance constant (Delay distance): &l t;3m	
	• Operating temperature: -50°C to +50°C	
	Rain Gauge:	
	• Principle: Tipping Bucket	
	• Resolution: 0.1 mm.	
	• Protection: IP65	
	01	
	Net Radiometer (4 Component):	
	• Response Time: 1 s	
	• Pyranometer:	
	• Spectral Range: 385 to 2105 nm	
	• Uncertainty in Daily Total: < 5%	
	 Irradiance: 0 to 2000 W/m². 	
	• Field of view:	
	• Upper detector: 180°	
	• Lower detector: 150°	
	• Directional error: < 35 W/m ²	
	• Pyrgeometer:	
	• Spectral Range: 5 to 30 µm	
	 Uncertainty in Daily Total< 10% 	1

 • Output Range: ±24 mV (The output range is typical for atmospheric applications.) Soil Moisture & Kamp: Temperature: Measurements Mack: Volumetric water content (VWC), permittivity, electrical conductivity (EC), and temperature Operating Temperature Range: 40° to 40°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Voltage Range: 90 to 36 Vdc Measurement Depth: Up to 1M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS'm Accuracy: ±28 (0 to 2.5 dS/m) +5% (full range) Volumetric water Content: Range to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (>: 12% soil organic carbon) or high clay content (>: 45% soil organic carbon) or high clay content (>: 45% soil organic carbon) or high clay content (>: 45% soil organic action) or high clay content (agt: 45% clay) may need a soil-specific calibration due to the dispervise nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: • Data Sampling Rat:: 1000 Hz • Analog Input Channels: 16 Nois • Analog Input Channels: 10 Nois • Analog Roput Channels: 10.00 My: ±200mV • Analog Roput Anary: Uot 30° Mico Voltage • Analog Roput Anary: Uot 30° Mico Voltage • Analog Input Accuracy: Voltage measurement accuracy in loss of accuracy. The datalogger should these input ranges: ±5000mV, ±200mV • Analog Input Accuracy: Voltage measurement accuracy no loss than ± (0.04% of reading + offset) over temperature range of - 40° to 70°C • Voltage Excitation: at least from input shift Mode, provides a user-specified voltage sources that can operate in at least one of two modes. Switched Excitation Mode, a single 16-bit digital-conando converter (TAC), provides a user-specified voltage sources that conserts. Independently configurable tor Switch Clossure. F		
 Soil Moisture & Anny: Temperature: Measurements Made: Volumetic vater content (VWC), permittivity, electrical conductivity (EC), and temperature Operating Temperature Range: 40° to +60° C Maximum Installation Traque: 54 M m (40.1-b) Operating Voltage Range: 9 to 36 Vde Measurement Depth: Up to 1 M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15% (herven -30° and +40°C) Data Sampling Rate: 1000 H7 Analog Input Range: The datalogger should have multiple input changes. The datalogger should have multiple input ranges along with "Auto-Ranging" facility to measure the sensors accuracy with the sensors accuracy with a tour any loss of accuracy: 1000MV, -200MV Analog Input Range: 100M v7 200MV Analog Resolution: 0.05 Micro Voltage Analog Resolution: 0.05 Micro Voltage Analog Resolution: at least four independently configurable voltage sources that can operative a single 16-bit digital-to-analog converter (IDAC), provides a user-specified voltage Supply Mode, provides continuous 3.3 Vdc or 5 Vdc. Pulas Counting Channel: A least two inputs individually configurable for with Operating the range for apply in the input here in the range for apply input here input here inputs individually configurable for switch Operating and the resonstration of the ord or 5 Vdc. Pulas Counting Acturacy: Voltage measurement accuracy. The datalog Supply Mode, provides continuous 3.3 Vdc or 5 Vdc. Pulas Counting Channel: A Least two inputs individually configurable for age of remi	• Output Range: ±24 mV (The output range is typical for	
 Measurements Made: Volumetric water content (VWC), permittivity, electrical conductivity (CC), and temperature Coperating Temperature Range: 40 to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Voltage Range: 9 to 35 Vde Measurement Depth: Up to IM (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high clay content (> 43% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ± 0.15°C (herween -30° and +40°C) Data Logger Specification: Data Sampling Rate: 1000 Hz Analog Input Channels: 16 Nos Analog Input Channels: 16 Nos Analog Input Change: The datalogger should have multiple input ranges along with "Auto-Ranging" facility to measure the sensors accurately without any loss of accuracy. The datalogger should have input ranges: ±5000 NV, ±1000mV Analog Resolution: 0.05 Micro Voltage Analog Input Accuracy: Voltage measurement accuracy no less than ± (0.06% of reading + offset) over temperature range of -40° to 70°C Voltage Resolution: 0.05 Micro Voltage Voltage Resolution: 0.05 Micro Voltage Young Excitation: at least four independently configurable torling during Runge during measurement only. Switched Excitation Mode, a single 16-bit digital-to-analog converter (DAC), provides a user-specified voltage during measurement only. Switched Resolution of 5 Vdc. Voltage Resolution: 3.2 Vdc measurement. Ing. Switched Costard put with Minimum Switch Closed Time: 5 ms, Minimum Switch Olesed Time: 6 ms, Maximum Bounce Time: 1 ms open without being counted. Viari At least eight ports conf	atmospheric applications.)	
 permittivity, electrical conductivity (EC), and temperature Operating Temperature Range: 40: to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Voltage Range: 9 to 36 Vde Measurement Depth: Up to 1 M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Content: Range 0 to 100% Water Content Content: Range 0 to 100% Water Content Accuracy: ±1.5% (typical with most soils Soils with high organic matter (> 12% soil organic catbon) or high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: +0.15% (between -30° and +40°C) Data Logger Specification: • Data Sampling Rat:: 1000 Hz • Analog Input Channels: 16 Nos • Analog Input Channels: 16 Nos • Analog Input Channels: 1000mV; ±200mV • Analog Input Channels: 1000mV; ±200mV • Analog Input Channels: 1000mV; ±000mV • Analog Input Channels: 0.04% of reading + offset) over temperature range of -40° to 70°C • Voltage Fsecification: 10.05 Micro Voltage • Analog Not Accuracy: Voltage measurement accuracy no less than ± 0.04% of reading + offset) over temperature range of -40° to 70°C • Voltage Fsecification: at least four independently configurable voltage sources that con operate in at least one of two modes. Switched Excitation Mode, a single 16-bit digital-to-analog converter (DAC), provides a user-specified voltage during measurement only. Switched Regulated Voltage Supply Mode, provides continuous 3.3 Vde or 5 Vde. • Pulse Counting Channel: At least two inputs individually configurable for switch Closed Time: 1 ms open without being counted. • Maxim Bounce Time: 1 ms open without being counted. <l< td=""><td>Soil Moisture & amp; Temperature:</td><td></td></l<>	Soil Moisture & amp; Temperature:	
 Operating Temperature Range: -40° to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Voltage Range: 9 to 36 Vdc Measurement Depth: Up to IM (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: :22% (0 to 2.5 dS/m) ±5% (full range) Volumetrie water Content: Range 0 to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high elay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: • Data Sampling Rate: 1000 Hz • Analog Input Kange: The datalogger should have multiple input ranges along with 'Auto-Ranging'' facility to measure the sensors accurately without any loss of accuracy. The datalogger should these input ranges: ±5000mV, ±1000mV, ±200mV • Analog Input Charnels: 10 NG free of the datalogger should have transplice mature ange of 0° to 40°C, no less than ± (0.06%) of reading + offset) over temperature range of -40° to 70°C • Voltage Excitation: at least four independently configurable voltage sources that can operate in at least one of two modes. Switched Excitation Mode, a single 16-bit digital-to-analog converter (DAC), provides a user-specified voltage for VAC measurement only. Switched Regulated Voltage Supply Mode, provides a user-specified voltage for Voltage Supply Mode, provides a user-specified voltage for Voltage Canibardia and operate in at least individually configurable voltage for the data operate in at least one for two inputs individually configurable voltage for the distribution class. • Palse Counting Channel: At least two inputs individually configurable for digital input and output including status high/low, pulse width modulation, external	Measurements Made: Volumetric water content (VWC),	
 Maximum Installation Torque: 54 N m (40 ft-lb) Operating Voltage Range: 9 to 36 Vdc Measurement Depth: Up to 1M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: • Data Sampling Rate: 1000 Hz • Analog Input Channels: 16 Nos • Analog Input Range: The datalogger should have multiple input ranges along with "Auto-Ranging" facility to measure the sensors accurately without any loss of accuracy. The datalogger should have multiple input ranges along with "Auto-Ranging" • Analog Input Chancels: 16 Nos • Analog Input Chancels: 16 Nos • Analog Input Chancels: 10 SM icro Voltage • Analog Input Chancels: 10 SM icro Voltage • Analog Input Accuracy: Voltage measurement accuracy no less than ± (0.04% of reading + offset) over temperature range of 0° to 40°C, no less than ± (0.06% of reading + offset) over temperature range of - 40° to 70°C • Voltage Excitation: at least four independently configurable voltage sources that can operate in at least one of two modes, Switched Excitation Mode, a single 16-bit digital-to-analog converter (DAC), provides a user-specified Voltage during measurement only. Switched Regulated Voltage Supply Mode, provides continuous 3.3 Vd or 57 Vdc. • Pulse Counting Chancel: At least two inputs individually configurable for switch closure, high- frequency pulse, or low-level AC measurements. Independent 32;-high-frequency pulse counting, UART, RS-232, R	permittivity, electrical conductivity (EC), and temperature	
 Voltage Range: 9 to 36 Vdc Measurement Depth: Up to 1M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ± 0.15°C (between -30° and +40°C) Data Logger Specification: • Data Sampling Rate: 1000 Hz • Analog Input Channels: 16 Nos • Analog Input Channels: 16 Nos • Analog Input Channels: 16 Nos • Analog Roput Channels: 16 Nos • Analog Input Range: The datalogger should have input ranges: -5000mV, ±1000mV, ±200mV • Analog Input Accuracy: Voltage measurement accuracy no less than ± (0.04% of reading + offset) over temperature range of -40° to 70°C. • Voltage Excitation: at least four independently configurable voltage sources that can operate in at least one of two modes. Switched Excitation Mode, a single 16-bit idigial-to-analog converter (DAC), provides a user-specified Voltage Supply Mode, provides a user-specified Voltage Supply Mode, provides a continuous 3.3 Vdc or 5 Vdc. • Pulse Counting Channel: At least two inputs individually configurable for switch closure. high-frequency pulse, or low-level AC measurements. Independent 32-bit counter for each input. • Switch Closure Inputs with Minimum Switch Closed Time: 5 ms, Minimum Switch Closed Time: 6 ms, Maximum Bounc	Operating Temperature Range: -40° to +60°C	
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SECTION - VI

GENERAL CONDITION OF CONTRACT

1. **Bid Security & Tender Fee**. The bidder shall submit NEFT/ Online Payment of **Rs. 2.500.00** (Rupees Two Thousand Five Hundred only) towards tender fee to the account of "Central University of Jharkhand, Ranchi" and Bid Security/EMD as per **Format VIIbefore the last date of bid submission**. NEFT / Online Payment transfer details for Tender Fee and Bid Securing Declaration Form (**Format VII**) must be submitted along with the tender document as per the following details: -

(a) The terms and conditions of Bid Securing Declaration Form will be executed, if: -

(i) The bidder fails to supply the ordered item as per the supply/ purchase order, or

(ii) In the event of withdrawal of offer during the validity period, or

(iii) Non-confirmation of acceptance of the letter of intent/ purchase order within the stipulated time after issue of the letter of intent/ work order by the University, or

(iv) The successful bidder fails to furnish the required Performance Security **within 30 days** on receipt of notification of award of work order from the University, or

(v) The bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of the tender.

(b) Bid Securing Declaration Form should remain valid for a period of **45** (Forty Five) **days** beyond the final bid validity period.

(c) The Bid Securing Declaration Form must be submitted as per provision on OM No. F. 9/4/2020-PPD dated 12th November, 2020, Ministry of Finance. (**Format VII**)

2. <u>Performance Security.</u> On receipt of notification of award of supply order from the University, the successful Bidder within 30 days shall furnish the performance security of 03% (three percent) of Total value of supply/ purchase order in the form of DD/FDR/PBG in favour of "Central University of Jharkhand payable at Ranchi"issued from any of commercial bank in India in an acceptable format (Format - VI): -

(a) Performance security should remain valid for a period of **60 days** beyond the date of completion of warranty period.

(b) The Performance Security will be forfeited and credited to the University account in the event of a breach of terms and conditions of Supply order/ agreement/ contract.

(c) It will be refunded after 60 days, post successful completion of all terms and conditions of supply order and warranty.

3. Warranty(FORMAT - VIII):

(a) **Oneyear** onsite comprehensive warranty and also give the warranty declaration that everything to be supplied by us hereunder shall be free from all defects and faults in material, workmanship, transportation hazards, and shall be of the highest quality and material of the type ordered, shall be in full conformity with the specifications. During the warranty period, replacement of any part of items or rectification of defects of works will be free ofcost.

(b) Any deviation in the material and the specifications from the accepted terms may liable to be rejected and the bidders need to supply all the goods in the specified form to the satisfaction/ specifications specified in the order / contract and demonstrate at their own cost. The payments shall be made only after receiving the material in the required specifications and quality to the satisfaction of the Universityauthorities.

(c) The Vendor shall warrants that any Material supplied hereunder shall conform to the generally recognized manufacturing and safety standards of the Vendor's industry as per Indian Standard Institution (ISI)/ Indian Standard (IS) or similar standard. The Vendor's specifications on performance as detailed in the Vendor's brochures, sales literature and other specifications as may be available to the university.

(d) Vendor should provide insurance up to the delivery point (on-site and not up to the nearest transit/ transport point) and until the time of installation.

(e) In addition to any other express or implied warranties, the Vendor warrants that the material furnished pursuant to this order willbe free from defects in design except to the extent that such items comply with detailed designs provided by the university; of merchantable quality and suitable for the purposes, if any, which are stated in the tender/quotation.

(f) This warranty provision shall survive any inspection, delivery, acceptance, payment, expiration or earlier termination of this order and such warranties shall be extended to the employees, students, and users of the material. Nothing herein, however, shall limit the University's rights in law or equity for damages resulting from delivery of defective goods or damage caused during the delivery of goods or provision of services.

(g) Rights granted to the University in this article entitled WARRANTIES are in addition to any other rights or remedies provided elsewhere in this order or in Law.

4. Payment Terms & Conditions:

(a) **Terms of payments for Goods:** 100% of the total payment shall be releasedon submission of proof of delivery of complete item/stores i.e. stores/consignee receipt, inspection report and satisfactory installation certificate of the item at the consignee's premises and post verificationofthe" *PerformanceSecurity@03%"oftheSupply Order value*.

(b) **Documents for Payments of Domestic Goods:**

(i) Supplier's Invoice indicating, inter alia description and specification of the goods, quantity, unit price, totalvalue, GST no. of seller & buyer (CUJ), HSN/ SAC No., amount & percentage rate of GST(CGST/ SGSTetc.);

- (ii) Packinglist;
- (iii) Insurance certificate, ifapplicable;
- (iv) Railway receipt/ consignment note/ delivery challan;
- (V) Manufacturer's and firm's warranty certificate;

(vi) Inspection and installation certificate duly signed by the supplier's representative/ service engineerand university official;

(vii) Any other document/ certificate(s) as and if required in terms of thepayment/ supply order/ tender document.

- (viii) Copy of cancelled check/NEFT detail for making onlinepayment.
- (ix) Performance Security
- (c) Central University of Jharkhand is entitled for concessional GST @ 5% as per Notification No. 45/2017 (Central Tax Rate) (as applicable) and Notification No. 47/2017-(Integrated

Tax Rate) dated 14-11-2017 (as applicable). This University is also registered with DSIR vide TU/V/RG-CDE (1154)/2019 dated 28.11.2019 for availing concessional & Custom Duty (as applicable).

(d) <u>Invoicing / Payments / Set-Offs</u>: After completion of supply against the purchase order, the Vendor shall send duplicate invoices including item number to the University's concernDepartment. Payment of invoice shall not constitute acceptance of Material ordered and shall be subject to appropriate adjustment, if the Vendor failed to meet the requirements of thepurchase order. The University shall have right at any time to set-off any amounts due to the Vendor, (or any of its associated or affiliated companies) against any amounts owed by the university with respect to thepurchase order.

5. The University will release payment **within 30 working days** from the date of the receipt of bills along with all the above necessary documents, if found in order.

6. The successful bidder/ firm/ agency **shall not be paid any kind of advance** under any circumstances.

7. **Prices and Taxes:** Prices quoted should be firm and shall remain firm until required deliveries have been completed unless otherwise expressly agreed to, in writingby both parties. The vendor agrees that any price reduction made with respect to Material covered by this order subsequent to placement will be applied to the order.

(a) **Elements of Price:** Where the price has several components such as the price of the goods, cost of installation and commissioning, operators' training, and so on, bidders should furnish a cost break-up indicating the applicable prices and taxes for each of such components along with the overallprice.

(b) **Currency:** domestic tenderers are to quote and accept their payment in Indian currency; Indian agents of foreign suppliers are to receive their agency commission in Indian currency; costs of imported goods, which are directly imported against the contract, may be quoted in foreign currency (currencies) and will be paid accordingly in that currency; and the portion of the allied work and services, which are to be undertaken in India (like installation and commissioning of equipment) are to be quoted and paid in Indiancurrency.

(C) The bidder shall certify that the quoted rates are not higher than those quoted for any Govt. Dept. or Institution or GeM or any organization and that if during the years at any time the bidder has quoted rates lower than those quoted against this tender, the University would be given the benefit of Lower rates by the bidder. The relevant documents should be enclosed with technical bid.

(d) Central University of Jharkhand is entitled for concessional GST @ 5% as per Notification No. 45/2017 (Central Tax Rate) (as applicable) and Notification No. 47/2017-(Integrated Tax Rate) dated 14-11-2017 (as applicable). This University is also registered with DSIR vide TU/V/RG-CDE (1154)/2019 dated 28.11.2019 for availing concessional & Custom Duty (as applicable).

(e) The price quoted by the bidder should be final and no escalation shall be permitted during the delivery period except for statutory levies or government escalation, enhanced or introduced subsequent to the date of submission of the price bid duly supported by documentaryevidence unless otherwise expressly agreed to, in writingby both parties.

8. **Prices should be FOR** –Central University of Jharkhand, Cheri-Manatu, Kanke, Ranchi and for

imported equipment supplier will be responsible for custom clearance and forwarding the same up to university campus. Custom Duty will be reimbursed on actual basis, after submission of the evidence in original. All prices specified herein include all charges for, but not limited to, inspection, and packaging. Prices set forth shall be inclusive of applicable taxes until and unless specified in the schedule.

9. **Price Fall Clause:** If at any time prior to delivery of the equipment/stores, the bidder/supplier reduces the sale price of such equipment stores as covered under this tender enquiry, to any organization (including Central/State/Deemed university) at price lower than the price quoted under this contract, he shall forthwith reduce the price payable under this tender for the equipment/stores being supplied after the date of coming into force of such reduction, the price of equipment/stores shall stand corresponding reduced.

10. **Insurance**: Wherever necessary, the goods supplied under the contract, shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the contract. If considered necessary, insurance may cover "all risks" including war risks and strike clauses. The amount to be covered under insurance should be sufficient to take care of the overall expenditure to be incurred by the Procuring Entity for receiving the goods at the destination. Where delivery of imported goods is required by the purchaser on CIF/CIP basis, the supplier shall arrange and pay for marine/air insurance, making the purchaser beneficiary. Where delivery is on FOB/FAS basis, marine/air insurance shall be the responsibility of the purchaser.

11. **Deduction of Income Tax. GST and so on. at source from payment to suppliers**: This will be done as per existing government rules/ regulations/ laws in force during the currency of the contract.

12. **Delivery Period**: The item should the delivered to Central University of Jharkhand and within a time period **30 days**& installation be completed within **next 15 days**. If any material is not delivered by the date specified therein, the University reserves the right, without liability, to cancel the order for undelivered material not yet shipped or tendered, and to purchase the same from another vendor and to charge the defaulting Vendor for any loss incurred in this transaction. Any provisions thereof for delivery by instalment shall not be construed as obligatory unless agreed upon by both the parties. The University shall have the right to refuse deliveries made more than one week in advance of any delivery schedule appearing in the order unless arrangements for such early delivery have been confirmed with the receivingparty.

If the vendor is unable to complete performance at the time specified for delivery, by reason of strikes, labour disputes, riot, war, fire or other causes beyond the Vendor's reasonable control, the university at its option, may elect to take delivery of material and to pay such proportion of the contract price as deemed reasonable by the university.

13. Shipping, Packaging and Labelling: All Material purchased hereunder must be packed and packaged to ensure its safe delivery in accordance with good commercial practices and where incorporated, the University's packaging specification. The Supplier shall provide such packing of the Goods as is required to prevent their damageordeteriorationduringtransittotheirfinaldestinationasindicatedinthe Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the goods' final destination and the absence of heavy handling facilities at all points in transit, including the final destination. The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in the contract and in any subsequent instructions ordered by the Purchaser. It is the sole responsibility of the vendor to provide/replace the item/goods, if it is lost or broken during the shipping or transportation due to

whatever may be the reason. Vendor is responsible to ensure, by contacting the University, that the shipping has been properly done i.e., all the items/goods have properly reached theUniversity.

14. **Installation, Commissioning& Training:** Free of cost at University. The OEM must ensure timely installation, commissioning and training of the complete unit with necessary support to the indenters, as per details and lists to be made available by the Stores Section or the indenting Departments/Centre/Schools.

15. <u>Liquidated Damages (LD)</u>: If vendor fails to deliver any of or all products or does not perform the services within the period specified in the contract, the University reserves the right to, without prejudice to its other remedies under the contract, deduct from the bill, a sum equivalent to **0.5 % of the price of undelivered stores** at the agreed price **for each week to maximum limit of 10% of the value of stores** so undelivered. Once maximum is reached, the second party may consider termination ofcontract.

16. **Inspection and Acceptance:** Material procured from vendor shall be inspected and tested by the University or its designee at vendors cost,**ifdeemed necessary by the University**, the Vendor shall provide without charge, all reasonable facilities and assistance for such inspection and test. Any inspection records relating to Material covered by this agreement shall be made available to the University during the performance of theorder.

(a) If any Material covered by this agreement is defective or otherwise not conforming to the requirements of this agreement, the University may, by written notice to the Vendor:

- (i) rescind the purchase/supply order as to such non-conforming Material;
- (ii) accept such material at an equitable reduction inprice;

(iii) reject such non-conforming material and require the delivery of suitable replacements

(b) If the vendor fails to deliver suitable replacements promptly, the university, with notice of seven business days, may replace or correct such material and charge the vendor the additional cost occasioned thereby, or terminate this order fordefault. No inspection (including source inspection) test, approval (including design approval) or acceptance of material shall relieve the Vendor from responsibility for defects or other failures to meet the requirements of this order. Rights granted to the University in this article entitled INSPECTION is in addition to any other rights or remedies provided elsewhere in this order or in Law.

17. <u>Modification of bids</u>.

(a) The University reserves the right to alter/ modify any or all conditions of this tender document before submission of Technical and Financial bids.

(b) The agencies/ bidders/ firms shall not be permitted to alter or modify their bids after last date of submission of bids.

(c) At any time prior to the deadline for submission of tender, the University may amend the tender documents issuing by addendum/ corrigendum. The University shall have the right at any time, by written notice, in the form of an amendment order, to make any changes, if deems necessary, including, but not limited to, changes in specifications, design, delivery, testing methods, packing or destination. If any such required changes cause an increase or decrease in the cost of or the time required for performance, an equitable adjustment shall be made in the contract price or delivery

schedule,orboth.AnyclaimbytheVendorforadjustmentunderthisclauseshallbedeemedwaived unless asserted in writing within ten (10) days from receipt by the Vendor of notice of change

(amendment order). Price increase, extension of time for delivery and change in quantity shall not be binding on the University unless sufficiently justified by vendor and accepted by the university in a form of amendment/ modified Order issued and signed by the University.

18. <u>Selection of the Bidder</u>. For the purpose of selection of the bidder, a Single Stage Two Envelops System (Two Bid System) process will be followed. The response to the tender should be submitted in two parts viz. **Technical Bid & FinancialBid**.

(a) **Technical Bid:** Technical bid should contain information regarding the company/ firm registration details, Authorization letter, Clientele list (List of Users), Performance certificate from clients, self-declaration for not black listed, business turnover, experience and other details of the firm to judge the suitability of the bidder. **(Format II with Format I – Check List)**

(b) **Financial Bid:** Financial bid should contain rate of the items required to be supplied along with tender form, duly filled and signed by the authorizedperson.Conditional Offerwill not beaccepted. **(Format III)**

(c) The Technical Bid will be opened on the prescribed tender opening date in the presence of agencies/ bidders/ firms or their authorized representative wishes to participate. The Financial Bid of all technically qualified agencies/ bidders/ firms will be opened as per the intimated/ scheduled date and time of financial bid opening.

19. Evaluation ofbid.

(a) Technical Bid along with pre-qualification criteria of this tender will be evaluated by an evaluation committee nominated by competent authoritytoconcludethetender.Financialbidsofbidderswhoaretechnically qualified as per evaluation committee will only be opened.

(b) Unless otherwise stated in the price bid, it will be construed that the **price quoted is inclusive of all taxes and duties**. **No claim** in this regard will be entertained **at a laterstage**.

(C) The price quoted by the bidder should be final and no escalation shall be permitted during the contract period except for statutory levies or government escalation, enhanced or introduced subsequent to the date of submission of the price bid duly supported by documentaryevidence unless otherwise expressly agreed to, in writingby both parties.

(d) The **overall successful bidder/ lowest bidder (L1)** will be decided on the basis of lowest reasonably quoted **overall/ Grand Total** of **all tendered items** in Financial Bid.

(e) In case of tie of reasonably quoted overall/ Grand Total, the following criteria will applied as tie-breaker: -

(i) Maximum average annual turnover of last three financial years of the agency/ firm/ company – **if found equal**, then;

(ii) Maximum no. of Supply and installation of **Surface observatory alongwith automatic** weather station or similar type itemsby the agency/ firm/ company

20. <u>Rejection ofBids</u>:

(a) If bidders give wrong information in their bid, University reserves the right to reject such bids at any stage and forfeit the **Bid Securing Declaration Form**/ **Performance Bank Guarantee** and cancel the order, ifawarded.

(b) If the **technical offer contains any price** information the offer will be **summarily rejected**.

(c) Canvassing in any form in connection with the tender is strictly prohibited and the bids submitted by the bidder who resort to canvassing are liable forrejection.

(d) Unsigned tenders/bids, unattested corrections and over writing by bidders are also liable

forrejection. **All pages** of this tender documents have to be **duly signed and stamped** by the authorised signatory.

(e) Bids submitted without supporting documents as mentioned or required to submit with bids are liable to berejected.

(f) The Tenderer must confirm in their bid acceptance of all the terms and conditions in this enquiry. Any non-acceptance or deviations from the terms and conditions must be clearly brought out. However, tenderers must note carefully that any conditional offer or any deviation from the terms and conditions of this enquiry may render /liable the Quotation forrejection.

(g) The University reserves the right to reject any or all the bids without assigning any reason thereof.

(h) Incomplete tenders, amendments and additions to tender after opening are liable to be ignored and rejected.

(i) The Technical Bid will not be considered for applicants who's **Tender Fee** and **Bid Securing Declaration Form** is not found in order.

(j) Overwriting should be avoided. Correction, if any, should be made by neatly by crossing out, signed and re-writing. Use of fluid (whitener) is not allowed and such tenders shall be rejected. Pages of the tender document are numbered. Additional sheets, if any added by the supplier, before last date of submission of bid should also be numbered by him.

21. <u>Withdrawal of bids</u>. No bidder will be allowed to withdraw it's bid in the interval between the deadline of submission of bids and expiration of period of bid validity. Withdrawal of bid during this period will result in forfeiture of the bidder's bid security Declaration Form and othersanctions.

22. **<u>Bid Validity</u>**. Bids should be valid for a period of **60 days** from the date of opening of bid.

23. **Final decision-making authority.** The Vice Chancellor, Central University of Jharkhand, Ranchi reserves the right to accept or reject any bid and to annul the tender process and reject any or all bid at any time, without assigning any reason or incurring any liability to the applicants.

24. **<u>Cancellations of tender/ Contract</u>**: The University reserves right to accept or reject any or all Bids. The University also reserves the right to annul the bidding process and reject all bids at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Purchaser's action. The University may cancel agreement entered with vendor in whole or in part, for no cause, upon written, e-mail, or telex notice to the Vendor, in the event that thevendor: -

(a) Fails to comply with any term or condition of this order including, but not limited to, delivery terms;or

(b) Appoints a receiver, liquidator or trustee in bankruptcy or other similar officer over any or all of its property or assets;or

(c) Files a voluntary petition in bankruptcy;or

(d) Has had filed against it an involuntary petition in bankruptcy which remains in effect for thirty (30) days;or

(e) Voluntarily ceases trading;or

(f) Merges with or is acquired by a third party;or

(g) The delivery of the goods/ services is delayed for causes **not attributable to Force Majeure** for more than **15 days** after the scheduled date of delivery. ;or

(h) The firm/agency is declared bankrupt or becomes insolvent. ;or

(j) The delivery of goods/ services is delayed due to causes of Force Majeure by more than (06 months) provided Force Majeure clause is included in contract. ;or

(k) The University has noticed that the supplier has utilised the services of any Indian/ Foreign agent in getting this contract and paid any commission to such individual/company etc. ;or

(l) As per decision of the Arbitration Tribunal. ;or

(m) Assigns any of its rights or obligations under the order to a third party without the university's prior writtenconsent; or

Upon the occasion of any one of the aforesaid and in addition to any remedies which the university may have in Law or in Equity, the university may also cancel this order or any outstanding deliveries hereunder by notifying the Vendor in writing of such cancellation and the Vendor shall thereupon transfer title and deliver to the university such work in progress or completed material/ services as may be requested by the university. The University shall have no liability to the Vendor beyond payment of any balance owing for Material/ service purchased hereunder and delivered to and accepted by the university prior to the Vendor's receipt of the notice of termination, and for work in progress requested for delivery to the university.

25. Other terms & conditions.

(a) Central University of Jharkhand reserves the right to verify/ seek confirmation of all original documentary evidence submitted by bidders in support of above mentioned specification for eligibility criterion. In case any information furnished by the bidder is found to be false/ incorrect at any stage, the bid shall be summarily rejected and no correspondence on the same shall be entertained.

(b) If any information furnished by the applicant is found to be incorrect at a later stage, he shall be liable to be debarred from tendering/taking up of work in Central University of Jharkhand. The Central University of Jharkhand reserves the right to verify the particulars furnished by the applicantindependently.

(c) The Central University of Jharkhand reserves the right to reject any or all prospective applicants without assigning any reason and to restrict the list of biddersto any number deemed suitable by it, if too many applications are received satisfying the basic PQcriteria.

(d) The applicant may furnish any additional information which he thinks is necessary to establish his capabilities to successfully complete the envisaged supply. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of Tender document unless it is called for by theUniversity.

(e) After issuance of acceptance of the contract, you shall deploy the requisite no. of security personnel and commence the security services at the earliest as per the terms & conditions of the contract and the directives of the authorities of the university.

27. <u>Letter of transmittal</u>. The bidder should submit the letter of transmittal along with tender document **(Format-IX)**.

SECTION - VII

SPECIAL CONDITION OF CONTRACT

1. **Refund from Supplier**. If the supplier, after claiming and receiving reimbursements for GST or other taxes and so on, from the purchaser, applies to the concerned authorities for refunds, on genuine grounds, of certain portions of such duties and taxes paid by it and receives the allowable refunds. Such refunds contain the university's share also (out of the payments already made by the university to that supplier) and that should be **refunded to theUniversity**.

2. **<u>Rescheduling</u>**. The University may without liability at least seven days prior to the scheduled delivery date appearing on the order defer delivery on any or every item under said order by giving oral notice to the Vendor (confirmed in writing within seven working days) of any necessaryrescheduling.

3. <u>Site Visit</u>. The bidder, at the bidder's own responsibility, risk and expenses, may be encouraged to visit and examine the site and it's surroundings and shall obtain all information that may be necessary for preparing the bid and entering into a contract for the services.

4. **Patent Indemnity**: The Vendor shall have to indemnify, hold harmless and defend the University, its employees, and students with respect to all claims, suits, actions and proceedings of actual or alleged infringements of any Letter, Patent, Registered or Industrial Design, Trademark or Trade Name, Trade Secret, Copyright or other protected right in any country resulting from any sale, use or manufacture of any Material delivered hereunder and to pay and discharge all judgments, decrees, and awards rendered therein or by reason thereof and bear all expenses and legal fees (including the University's) associated herewith. The university reserves the right to be represented in any such action by its own counsel at its own expense.

5. **Compliance with Laws**. After acceptance of tender, successful bidder shall have to comply with the requirements of all the existing laws. The Vendor shall also have to comply with the Fair Labour Standards Act and the Occupational Safety and Health Act, and all other applicable laws, ordinances, regulations and codes in the Vendor's performance hereunder. The Vendor will have to indemnify and hold the University and its customers harmless from any loss or damage that may be sustained by the University, by reason of the Vendor's failure to comply with any laws, ordinance, regulations andcodes.

6. **Settlements of disputes**. All the disputes shall be initially settled with mutual discussions or arbitration. Any dispute, disagreement of question arising out of or relating to this contract or relating to services or performance, which cannot be settled amicably, if any, with regard to providing services and interpretation of any clause in this agreement, the same shall be settled by way of Arbitration in the manner stated herein below.

7. **<u>Place of Jurisdiction</u>** The parties specially agreed that the courts of Ranchi alone shall have jurisdiction to adjudicate upon / entertain any claim with regard to the dispute between the parties hereto any matter arising out of the present agreement.

8. <u>Arbitration</u>. The arbitration proceedings will be followed as enumerated below: -

(a) All disputes or differences arising out of or in connection with the present contract or any part thereof should be settled by bilateral discussions.

(b) Any dispute, disagreement of question arising out of or relating to this contract or relating to services or performance, which cannot be settled amicably, shall within sixty (60) days or such longer period as may be mutually agreed upon, from the date on which either party informs the other in writing by a notice that such dispute, disagreement or question exists, will be referred to a sole Arbitrator, by the Vice Chancellor of the Central University of Jharkhand.

(c) The seat of Arbitration shall have been at Ranchi.

The arbitration proceedings shall be conducted under the Indian Arbitration and (d) Conciliation Act, 1996 as amended time to time.

Each party shall bear its own cost of preparing and presenting its case. The cost of (e) arbitration including the fees and expenses there to shall be shared equally by the parties, unless otherwise awarded by the arbitrator.

(f) The parties shall continue to perform their respective obligations under this contract during the pendency of the arbitration proceedings except in so far as such obligations are the subject matter of the said arbitration proceedings.

(g) The language of the arbitration shall be English.

9. Assignment/ Subcontracting/ Sublet. The Firm/Agency shall not assign the order received, any rightsunderthisagreementortobecomeduehereunderneitherdelegatednorsubcontracted/ sublet any obligations or work hereunder without the prior written consent of the University.

10. Force Majeure clause:

Neither party shall bear responsibility for the complete or partial non-performance of any (a) of its obligations (except for failure to pay any sum which has become due on account of receipt of goods/ Services under the provisions of the present contract), if the non-performance results from such Force Majeure circumstances as Flood, Fire, Earth Ouake and other acts of God as well as War, Military operation, blockade, Acts or Actions of State Authorities or any other circumstances beyond the parties control that have arisen after the conclusion of the present contract.

In such circumstances the time stipulated for the performance of an obligation under the (b) present contract is extended correspondingly for the period of time of action of these circumstances and their consequences.

The party for which it becomes impossible to meet obligations under this contract due to (c) Force Majeure conditions, is to notify in written form the other party of the beginning and cessation of the above circumstances immediately, but in any case not later than 10 (Ten) days from the moment of their beginning.

(d) Certificate of a Chamber of Commerce (Commerce and Industry) or other competent authority or organization of the respective country shall be a sufficient proof of commencement and cessation of the above circumstances.

(e) If the impossibility of complete or partial performance of an obligation lasts for more than 6 (six) months, either party hereto reserves the right to terminate the contract totally or partially upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in the agreement for the goods received.

11. In case, the successful bidder is awarded with supply/purchase order for supply and installation of Surface observatory alongwith automatic weather station, fail to execute the ordered items/ services as per supply order/ agreement/ tender term & conditions, the University shall award the order to **the next** higher responsive bidder at the rates offered by lowest responsive bidder [Rule 173(xvi) of GFR 2017].

OEM/ Authorized Dealer/agents of Supplier: when a firm sends quotation for an item 12. manufactured by some different company, the firm is also required to attach, in its bid, the manufacturer's authorization certificate and alsomanufacturer's confirmation of extending the required warranty for that product. In cases where the manufacturer has itself submitted the bid, the bids of its authorized dealer will not be considered and EMD will bereturned. **OEM's experience for qualification, will only be consider for** onlyone authorised dealer, having OEM letter for participation in this particular tender as

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authorized representative of OEM.

13. **<u>Conflict of Interest among Bidders/Agent</u>**: The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process,if:

(a) They have controlling partner (s) in common; or

(b) They receive or have received any direct or indirect subsidy/financial stake from any of them;or

(c) They have the same legal representative/agent for purposes of this bid; or

(d) They have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another bidder;or

(e) Bidder participates in more than one bid in this bidding process. Participation by a bidder in more than one bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/sub- assembly/assemblies from one bidding manufacturer in more than one bid.

(f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot representtwo manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following:

- (i) The principal manufacturer directly or through one Indian agent on his behalf; and
- (ii) Indian/foreign agent on behalf of only one principal.

(g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;

(h) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/common business/management units in same/similar line of business.

17. All services for the successful supply& installation of ordered item shall be performed by persons qualified and experienced in performing such services.

18. **Access to Books of Accounts:** In case it is found to the satisfaction of the University that the firm/agency has engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents/Agency Commission and penalty for use of undue influence, the firm/agency, on a specific request of the University, shall provide necessary information/ inspection of the relevant financial documents/information.

19. **Penalty for use of Undue influence:** The firm/ agency undertakes that he has not given, offered or promised to give, directly or indirectly, any gift, consideration, reward, commission, fees, brokerage or inducement to any person in service of the University or otherwise in procuring the Contracts or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of the present Contract or any other Contract with the Government of India for showing or forbearing to show favour or disfavour to any person in relation to the present Contract or any other Contract with the Government of India. Any breach of the aforesaid undertaking by the Seller or any one employed by him or acting on his behalf (whether with or without the knowledge of the firm/ agency) or the commission of

any offers by the firm/ agency or anyone employed by him or acting on his behalf, as defined in Chapter IX of the Indian Penal Code, 1860 or the Prevention of Corruption Act, 1986 or any other Act enacted for the prevention of corruption shall entitle the University to cancel the contract and all or any other contracts with the firm/ agency and recover from the firm/ agency the amount of any loss arising from such cancellation. A decision of the University or his nominee to the effect that a breach of the undertaking had been committed shall be final and binding on the firm/ agency. Giving or offering of any gift, bribe or inducement or any attempt at any such act on behalf of the firm/ agency towards any officer/ employee of the University for showing any favour in relation to this or any other contract, shall render the firm/ agency to such liability/ penalty as the University may deem proper, including but not limited to termination of the contract, imposition of penal damages, forfeiture of the Bank Guarantee and refund of the amounts paid by the University.

20. The supplier shall be available to contact at all times (24 X 07 Hrs a day) and message sent by WhatsApp, SMS, E-mail, Fax or any Special Messenger from University, shall be acknowledged immediately on receipt on the same day.

SECTION - VII

FORMATS (On letter head of Firm/ Agency)

<u>Format – I</u>

CHECK LIST

(To be filled by the bidder and submit supporting documents along with the Technical Bid)

All the pages of bid being submitted must be signed and sequentially numbered by the bidder irrespective of nature of content of the documents before uploading.

S. No.	Document details	Yes/ No	Page No. of Supporting documents
1.	Signed copy of Tender documents		
2.	Tender Fee		
3.	EMD Declaration Form (Format VII)		
4.	Valid MSME Certificate, if applicable		
5.	Company/ Firm registration details		
6.	Authorised Service Centre nearest from Ranchi (i.e. Authorised Dealership/ service centre Certificate, Registration documents, rent agreement/ property documents etc)		
7.	PAN No.		
8.	GST No.		
9.	Bank accounts details for NEFT payment		
10.	OEM / Authorised Dealership Certificate		
11.	OEM authorization letter for participation in this particular tender as authorized representative of OEM, if applicable		
12.	Income Tax Return (Last three years) ending 31 st March, 2021		
13.	Certified copies of CA Audited Annual accounts of the last three years ending 31 st March, 2021 by comprising following :- (a) Balance sheet (b) Profit and loss Statement (c) Income and expenditure account		
14.	List of Clients and successfully executed supply orders for Surface observatory alongwith automatic weather station or similar items during the last three years.		
15.	Copy of one successfully executed supply order of any Central/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University / Autonomous bodies.		
16.	Maximum no. of Supply and installation of Surface observatory alongwith automatic weather stationor similar type items by		

	the agency/ firm/ company (Attach supporting documents)	
17.	Acceptance of all terms & conditions towards after sales/ services as mentioned in the bid document.	
18.	Declaration of Non-Black Listing of firm, No family member/ relative at CUJ and other terms & conditions on Non-Judicial paper (As per Format V) .	
19.	Signed Un-priced copy of Financial Bid (BOQ) with " Nil " written in Rate and amount Column.	
20.	Signed copies of any other documents as mentioned in tender	
21.	If any other supporting documents/ certificate/ information supplied by bidder (ISO CERTIFICATION)	

<u>Note</u>: The tender/ bid shall be **submitted online** in two parts (Technical Bid and Financial Bid). The offers submitted by Post/ Fax/ email **shall not be considered**. No correspondence will be entertained in this matter.

(Signature of the Bidder with stamp of firm with Date)

TECHNICAL BID (on letter head of Firm/ Agency)

(A) GENERAL INFORMATION

Sl. No.	Particular	Details
1.	Name of the firm/ dealer/ agency	
2.	Address of the firm/ dealer/ agency	
3.	Address of Authorised Service Centre nearest toRanchi	
4.	Mobile No.	
5.	E-mail:	
6.	Registration Number and date of registration of company / cooperative / agency / SHG / Society, if any	
7.	Year of Establishment	
8.	Type of Organization: (Whether Proprietorship, Partnership, Private Ltd. Company or Co-operative body etc. In case the applicant is a non- individual, Certified copy of a Partnership deed/ Certificate of Incorporation/ Certificate of Registration issued by the Registrar of Cooperative Societies/ as the case should be enclosed)	
9.	GST Registration no.	
10.	PAN Card no.	
11.	Bank Accounts Details	
12.	OEM / Authorised Dealership No.	
		FY 2018-19Rs
13.	Annual Turnover (Rs. in Lakh) for last three financial years.	FY 2019-20Rs
		FY 2020-21Rs
14.	Income Tax Return for last three financial years	FY 2018-19 FY 2019-20 FY 2020-21
15.	Successfully completed order/ Performance certificates from previous clients with contact no. from 2017-18 to till date separately in respect of tendered or similar items.	
16.	Do you have at least three years' experience for successful supply& installation of minimum 03 Surface observatory alongwith automatic weather station or similar type of items to Central/ State Government/ Central	

	or State Govt. funded Academic and Research & Development (R&D) Institute or University/ Autonomous bodies/ Reputed Organisations/ Educational institute?	
17.	Copy of one successfully executed supply order ofSurface observatory alongwith automatic weather station or similar type of items to any Central/ State Government/ Central or State Govt. funded Academic and Research & Development (R&D) Institute or University / Autonomous bodies.	
18.	Maximum no. of Supply and installation of Surface observatory alongwith automatic weather stationor similar type items by the agency/ firm/ company Any other relevant information important in	
19.	the opinion of the tenderer.	
20.	Name, Designation, Mobile Number and email of senior executives, who can be contacted at any time.	

Note: Attach supporting documents for all the above mentioned details. Tenderer may use separate / additional sheet wherever required.

(Signature of the Tenderer with stamp of firm with Date)

TECHNICAL BID (on letter head of Firm/ Agency)

(B) FINANCIAL INFORMATION

Financial Analysis: Furnished following financial details, duly supported by certified copy of audited balance sheet, profit & loss statement for the last three years : -

Financial Year	Annual Turn over	Profit / Loss	Remarks
FY 2018-19			
FY 2019-20			
FY 2020-21			
Gross Total			
Average Annual Turnover of three years			

(Signature of the bidder with stamp of firm with Date)

Details of certifying Charter Accountant

Name:-

Reg. No.-

Membership No.-

Address with Mobile no. and E-mail -

<u>Certified by Chartered Accountant (ink signed with stamp)</u>

TECHNICAL BID (on letter head of Firm/ Agency)

FORM 'C' :DETAILS OF SUCCESSFUL SUPPLY & INSTALLATION OF SURFACE OBSERVATORY ALONGWITH AUTOMATIC WEATHER STATION OR SIMILAR TYPE OF ITEMS DURING LAST 03 YEARS.

Sl. No.	Name of tendered/ similar item supplied	Name of the organization & location	Value of order (in Lakh)	Date of delivery as per the order	Actual date of supply	Details* of any Litigation/ arbitration executed/ pending/ in progress, if any
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						

*also Indicate gross amount claimed and amount awarded by the Arbitrator

<u>Notes</u>: -

- 1. Submit the relevant supporting documents.
- 2. Please mention all successfully executed supply/ purchase order.
- 3. For deliverydate, submit copy of supply/ purchaseorder.
- 4. For actual date of supply, submit copy of completion certificate from thepurchaser.
- 5. Please clearly indicate the supply/ purchase order (in the above form) on the basis of whichpre-qualification is being sought.

(Signature of the Tenderer with stamp of firm with Date)

FORM 'D': TECHNICAL SPECIFICATIONS (COMPLIANCE STATEMENT)

Technical specification and requirements for "Supply and installation of Surface observatory alongwith automatic weather station"

Item No.: FIST 01	 Technical Specifications for Surface observatory alongwith automatic weather station should have following minimum specifications (better & higher specification will be given preference) 01 No. 						
Qty.							
Feature	Specifications	Compiled (Yes/No)	Deviation (if any)				
Instrument	Surface observatory alongwith automatic weather station						
Surface observatory	 Ordinary Rain Gauge FRP, Rain Gauge, non-recording 200 cm³ as per IS 5225-1992 with 4 Lts. Bottle & Over flow collector 20 MM Measure Glass Borosil Stevenson Screen (Double) as IS 5948-1970 as per IS 5948-1970 made of Teak wood Angle Iron Stand Maximum Thermometer as per IS 5681-1983 Minimum Thermometer as per IS 5681-1983 Dry Bulb Thermometer as per IS 5681-1983 Grass Minimum Thermometer as per IS 5681-1983 Grass Minimum Thermometer Water Thermometer Water Thermometer Open Pan Evaporimeter made of copper sheet with fixed Point gauge still well, Measuring Tube, wood rack, Thermometer with Clip as per IS 5973/1998 Measuring Jar for O.P. Wire Mesh for O.P. Wire Mesh for O.P. Wire Mesh for O.P. Sunshine Recorder as per IS 5592-1972; 5 cm, 20. Soil Thermometer as per IS 6592-1972; 5 cm, 20. Soil Thermometer as per IS 6592-1972; 5 cm, 20. Soil Thermometer as per IS 6592-1972; 10 cm 21. Soil Thermometer as per IS 6592-1972; 20 cm 23. Soil Thermometer as per IS 6592-1972; 30 cm 24. Iron Stand for Soil Thermometer Automatic Self-recording rain gauge with quartz Clock Soil Auger of Length 1 meter Hygrograph with quartz clock (Bimetallic) Old type Due Gauge Hygrograph Charts Thermograph Charts Thermograph Charts Thermograph Charts Therma Ball (Muslin Thread) 						

36. Whitting Psychrometer (As Per IMD Specification) 37. Ordinary Thermometer (Sea Surface) for water 38. Boille for Wet Bubl Thermometer 39. FRP, Rain Gauge, non-recording 200cm, as per IS 5225-1992 40. with 4 Ls. Bottle & Over flow collector (ordinary Rain Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer Automatic weather station System should consist of Rain Gauge, Air Temperature: and Irradiance Sensor along with Data Loggin System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Accuracy: 40.4°C (over the range -40 to -40°C)/ ±0.3°C (over the range -30°L to 60°C) or better • Reasurement Range: 0 - 100 % • Accuracy: ±1.5% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 80% RH) + 25% (at 25°C, over the range 0 to 100 mS or better <th>F</th> <th></th> <th></th>	F		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		35. Aneroid Barometer Indian (Analog)	
 37. Ordinary Thermometer (Sea Surface) for water 38. Bottle for Wei Bulb Thermometer 39. FRP. Rain Gauge, non-recording 200cm, as per IS 5225-1992 40. with 4 Ls. Bottle & Over flow collector (ordinary Rain Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer System should consist of Rain Gauge, Air Temperature and Irradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OFM Temperature: Measurement Range: 40 to 170°C or better Accuracy: ±0.4°C (over the range -30 to +70°C) / ±0.3°C (over the range -30 to +70°C) / ±0.5°C (over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 100% RH) or better Measurement Range: 60 – 1100 hPa or better Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 100% RH) or better Measuring Range, 0 – 100 % measured value or better Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 100% RH) or better Waesuring Range, 0 – 100 hPa or better Accuracy: ±1.8% (at 25°C, over the range 0 to 100% RH) or better Accuracy: ±1.8% (at 25°C, over the range 0 to 100% RH) or better Accuracy: ±1.8% (at 25°C, over the range 0 to 100% RH) or better Accuracy: ±1.8% (at 25°C, over the r		36. Whirling Psychrometer (As Per IMD	
38. Bottle for Wet Bub Thermometer 39. FRP, Ruin Gauge, non-recording 200cm, as per IS 5225-1992 40. with 4 Lts. Bottle & Over flow collector (ordinary Ruin Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer System should consist of Rain Gauge, Air Temperature, Ruinimum Thermometer Relative Humidity, Barometric Pressure, Soil Moisture & Ramp; Temperature, Ruinity, System should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Accuracy: 40.76 (over the range -40 to +70°C) / ±0.3°C (over the range -40 to +70°C) / ±0.4°C (over the range -40 to +70°C) / ±0.3°C (over the range -40 to +70°C) / ±0.3°C (over the range 0 to 80% RH / ±3% (at 25°C, over the range 0 to 80% RH / ±3% (at 25°C, over the range 0 to 80% RH / ±1.5 hPa (@ ±20°C) / ±1.0 hPa (@ 0° C to 10°C or better • Measurement Range: 40 - 1100 hPa or better • Measurement Range: 50 - 1100 % to exter • Measurement Range: 50 - 1100 hPa or better • Measurement Range: 50 - 100% KH or better • Measurement Range: 50 - 100% to rester • Measurement Range: 50 - 100 hPa or better • Measurement Range: 50 - 100 hPa or better • Measurement Range: 50 - 100 hPa or better •		Specification)	
38. Bottle for Wet Bub Thermometer 39. FRP, Ruin Gauge, non-recording 200cm, as per IS 5225-1992 40. with 4 Lts. Bottle & Over flow collector (ordinary Ruin Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer System should consist of Rain Gauge, Air Temperature, Ruinimum Thermometer Relative Humidity, Barometric Pressure, Soil Moisture & Ramp; Temperature, Ruinity, System should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Accuracy: 40.76 (over the range -40 to +70°C) / ±0.3°C (over the range -40 to +70°C) / ±0.4°C (over the range -40 to +70°C) / ±0.3°C (over the range -40 to +70°C) / ±0.3°C (over the range 0 to 80% RH / ±3% (at 25°C, over the range 0 to 80% RH / ±3% (at 25°C, over the range 0 to 80% RH / ±1.5 hPa (@ ±20°C) / ±1.0 hPa (@ 0° C to 10°C or better • Measurement Range: 40 - 1100 hPa or better • Measurement Range: 50 - 1100 % to exter • Measurement Range: 50 - 1100 hPa or better • Measurement Range: 50 - 100% KH or better • Measurement Range: 50 - 100% to rester • Measurement Range: 50 - 100 hPa or better • Measurement Range: 50 - 100 hPa or better • Measurement Range: 50 - 100 hPa or better •		37. Ordinary Thermometer (Sea Surface) for water	
per IS 5225-1922 40, with 41Ls. Bottle & Over flow collector (ordinary Rain Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer Automatic weather station System should consist of Rain Gauge, Air Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & annotation, The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to +70°C or better • Accuracy: 40 -470°C or better • Accuracy: 40 - 100 % • Accuracy: 40 - 100 % • Accuracy: 41.8% (at 25°C, over the range 0 to 80% (RH) / ±30% (at 25°C, over the range 0 to 80% (RH) / ±30% (at 25°C, over the range 0 to 100% RH) or better • Measurement Range: 00 - 1100 hPa or better • Accuracy: 40, 51 Pa (@ -20° °C to +50°°C) / ±2.0 hPa (@ - 40° • To reform Range 6 • Wind Speed & amp; Direction: • Measuring Range: 0 to 36			
per IS 5225-1922 40, with 41Ls. Bottle & Over flow collector (ordinary Rain Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer Automatic weather station System should consist of Rain Gauge, Air Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & annotation, The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to +70°C or better • Accuracy: 40 -470°C or better • Accuracy: 40 - 100 % • Accuracy: 40 - 100 % • Accuracy: 41.8% (at 25°C, over the range 0 to 80% (RH) / ±30% (at 25°C, over the range 0 to 80% (RH) / ±30% (at 25°C, over the range 0 to 100% RH) or better • Measurement Range: 00 - 1100 hPa or better • Accuracy: 40, 51 Pa (@ -20° °C to +50°°C) / ±2.0 hPa (@ - 40° • To reform Range 6 • Wind Speed & amp; Direction: • Measuring Range: 0 to 36		39, FRP, Rain Gauge, non-recording 200cm, as	
40. with 4 Ls. Bottle & Over flow collector (ordinary Rain Gauge) 41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer Automatic weather station Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature and Irradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entre system should be solar powered. Manufacturer Certificate Required from OEM Temperature: Measurement Range: -40 to +70°C or better • Measurement Range: -20°C to +60°C) or better • Resolution: 0.001° C or better • Resolution: 0.001° C or better • Resolution: 0.001° C or better • Measurement Range: 00 - 100 % • Accuracy: ±0.5 lth? al(@ ±20°C) / ±1.0 hPa (@ 0° C to • Measurement Range: 000 - 1100 hPa or better • Resolution: 0.01 FPa or better • Measurement Range: 000 - 100 hPa or better • Measurement Range: 000 - 100 hPa or better • Accuracy: ±0.5 hPa (@ ±20°C) / ±2.0 hPa (@ - 40° C to ±60°C or better • Resolution: 0.01 hPa or better Wind Speed: • Measuring Range: 0 to 360° • Accuracy: ±0.5 hPa (@ ±20°C) / ±2.0 hPa (@ - 40° C to ±60°C or better • Resolution:			
(ordinary Rain Gauge) 41, 20 MM Measure Glass Borosil 42, Grass Minimum Thermometer Automatic weather System should consist of Rain Gauge, Air Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp; Temperature and Irradiance Sensor along with Data Logging System. System will be installed in high humidity are so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Accuracy: ±0.4°C (over the range 40 to -70°C) / ±0.3°C (over the range -20°C to +60°C) or better Relative Humidity: • Measurement Range: 0 - 100 % • Accuracy: ±0.5 hPa (@ 100 % or the range 0 to 80% RID / ±3% (at 25°C, over the range 80 to 100% RID or better Barometric Pressure: • Measurement Range: 600 - 1100 hPa or better • Accuracy: ±0.5 hPa (@ ±20°C) / ±1.0 hPa (@ 0° C to: 10° Cor to tester • Measuring Range: 0-100 m/s or better • Measuring Range: 0-100 m/s or better • Resolution: 0.1 hPa or better <		~	
41. 20 MM Measure Glass Borosil 42. Grass Minimum Thermometer System should consist of Rain Gauge, Air Temperature, Relative Humidity, Barometric Pessure, Soil Moisture & amp; Temperature and Irradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacture Certificate Required from OEM Temperature: • Accuracy: 40 to 70°C or better • Accuracy: 20.4°C (over the range 40 to 170°C) / ±0.3°C (over the range 20°C to 160°C) or better • Resolution: 0001°C or better • Resolution: 0001°C or better • Resolution: 0001°C or better • Measurement Range: 0 - 100 % • Accuracy: ±1.8% (at 25°C, over the range 0 to 80% (R1) / ±3% (at 25°C, over the range 0 to 80% (R1) / ±3% (at 25°C, over the range 0 to 80% (R1) / ±3% (at 25°C, over the range 0 to 80% (R1) / ±3% (at 25°C, over the range 0 to 100° K) • Measurement Range: 600 - 1100 hPa or better • Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0°C to 0 • Measurement Range: 600 - 1100 hPa or better • Accuracy: ±1.8% (at 25°C cover the range 0 to 80% (R1) / ±1.5 hPa (@ -20°C to +50°C) / ±2.0 hPa (@ - 40° C to +60°C or better • Measuring Range: 0-100 m/s or better • Measuring Range: 0-100 m/s or better • Resolution: 0.0 hPa or better • Mad Speed: amp; Direction: • Heasuring Range: 0-100 m/s or better • Measuring Range: 0-100 m/s or better • Accuracy: 30 or better			
42. Grass Minimum Thermometer Automatic weather System should consist of Rain Gauge, Air Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & Temperature and Irradiance Sensor along with Data Logging System. System with be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: .40 to +70°C or better • Accuracy: 20.4°C (over the range -40 to +70°C) / ±0.3°C (over the range -20°C to +60°C) or better • Resolution .0.001° C or better Relative Humidity: • Measurement Range: 0 - 100 % • Accuracy: 1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 - 1100 hPa or better • Accuracy: 0.5 hPa (@ ±20°C) / ±1.0 hPa (@ 0° C to 10 • Of C or better • Measurement Range: 600 - 1100 hPa or better • Measurement Range: 600 - 1100 hPa or better • Measurement Range: 600 - 1100 hPa (@ ±20°C) / ±2.0 hPa (@ ± 40° C to +60°C or better • Measuring Range: 0.0 10 hPa or better • Measuring Range: 0.0 10 hPa or better • Measuring Range: 0.0 100 m/s or better • Measuring Range: 0.0 360° <t< th=""><th></th><th>· · ·</th><th></th></t<>		· · ·	
Automatic weather System should consist of Rain Gauge, Air Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & amp: Temperature and Iradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Measurement Range: 40 to +70°C or better • Resolution: 0001°C or better • Resolution: 0001°C or better Relative Humidity: • Measurement Range: 0 – 100 % • Accuracy: ±1.8% (at 25°C, over the range 0 to 80%, RH) / ±3% (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 – 1100 hPa or better • Measurement Range: 600 – 1100 hPa or better • Measurement Range: 600 – 1100 hPa (@ 0° C to 40°C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C to +60°C or better • Resolution: 0.01 hPa or better • Measureming Range: 0-100 m/s or better • Wind Speed: Agange: 0-100 m/s or better • Wind Speed: Agange: 0-100 m/s or better • Wind Speed: Agange: 0-100 m/s or better • Measuring Range: 0-100 m/s or better • Wind Speed: Agange: 0-100 m/s or better • Wind Speed: Agange: 0 to 360° • Accuracy: 3° or better • Wind Speed: Agangonce • Ber			
station Temperature, Relative Humidity, Barometric Pressure, Soil Moisture & Amp; Temperature and Iradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to $+70^{\circ}$ C or better • Measurement Range: -40 to $+70^{\circ}$ C or better • Resolution: 0.001° C or better Relative Humidity: • Measurement Range: 0° - 100 % • Accuracy: ±0.5 hPa ($@$ +20°C to +60°C) or better Relative Humidity: • Measurement Range: 0° - 100 % • Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 - 1100 hPa or better • Accuracy: ±0.5 hPa ($@$ +20°C to +50°C) / ±1.0 hPa ($@$ 0° C to 40°C to +60°C or better • Resolution: 0.1 hPa or better Wind Speed & amp; Direction: • IP Protection Rating 65 • Wind Speed: • Measuring Range: 0 -100 m/s or better • Measuring Range: 0 -100 m/s or better • Measuring Range: 0 -100 m/s or better • Wind Direction: • IP Protection Rating 65 • Wind Speed: 2° C to +50°C • Accuracy: 2° or better • Wind Direction: • Measuring Range: 0 -10 300° • Accuracy: 3° or better • Wind Speed: 1 m/s. or better • Wind Direction: • Starting Wind Speed: 2 m/s or better • Wind Direction: • Starting Wind Speed: 4 gr:90m/s (324kph, 200mph) • Distance constant (Delay distance): & 11,3m • Operating temperature: -50°C to +50°C Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 mm. • Protection: IP65 01 Net Radiometer (4 Component);			
Relative Humidity, Barometric Pressure, Soil Moisture & Kamp; Temperature and Irradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Accuracy: 50.4°C (over the range -40 to +70°C)/ ±0.3°C (over the range -20°C to +60°C) or better • Resolution: 0.001° C or better Relative Humidity: • Measurement Range: 0 – 100 % • Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH/) ±3% (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 – 1100 hPa or better • Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to 40°C) / ±1.5 hPa (@ +20° C to +50°C) / ±2.0 hPa (@ - 40° C to +60°C or better • Resolution: 0.01 hPa or better Wind Speed & amp; Direction: • JP Protection Rating 65 • Wind Speed: & g1:00 m/s or better • Measuring Range: 0.100 m/s or better • Measuring Range: 0.100 m/s or better • Wind Direction: • Measuring Range: 0.100 m/s or better • Accuracy: 3° or better • Wind Directions: • Starting Wind Speed: 4 (1;3m • Operating Secoff (2) (324kph, 200mph) • Distance constant (Delay distance): 441; 13m • Operating Emperature: 50°C to +50°C Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 m/s or better • Principle: Tipping Bucket • Resolution: 0.1 m/s		· ·	
$\begin{array}{l} & \& \text{Amp:} \\ Temperature and Irradiance Sensor along with Data Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. \\ Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to +70°C or better • Accuracy: ±0.4°C (over the range -40 to +70°C) / ±0.3°C (over the range -20°C to +60°C) or better • Resolution: 0.001° C or better Relative Humidity: • Measurement Range: 0 - 100 % • Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 30 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 - 1100 hPa or better • Accuracy: ±1.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to -40°C / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C) / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (@ -20° C to -50°C / ±2.0 hPa (@ - 40° C) / ±1.5 hPa (D m/s or better • Mind Direction: • IP Protection Rating 65 • Wind Speed: • Measuring Range: 0 to 30° • Accuracy: 3° or better • Wind Direction: • Starting Wind Speed : 1 m/s. or better • Starting Wind Speed : 1 m/s. or better • Starting Wind Speed : 1 m/s. or better • Starting Wind Speed : 1 m/s. or better • Starting Wind Speed : 1 m/s. or better • Derettion: 1 Pfs • Principle: Tipping Bucket • Resolution: 0.1 mm. • Protection: 1Pfs $	station		
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Logging System. System will be installed in high humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: 40 to +70°C or better • Accuracy: $\pm 0.4^{\circ}C$ (over the range -40 to +70°C) / $\pm 0.3^{\circ}C$ (over the range -20°C to +60°C) or better • Resolution: 0.001° C or better Relative Humidity: • Measurement Range: 0 – 100 % • Accuracy: $\pm 1.8\%$ (at 25°C, over the range 0 to 80% RH) / $\pm 3\%$ (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 – 1100 hPa or better • Accuracy: ± 0.5 hPa ($@$ +20°C) / ± 1.0 hPa ($@$ 0° C to $\pm 0^{\circ}C$) / ± 1.5 hPa ($@$ +20°C) / ± 1.0 hPa ($@$ - 40° C to +60°C or better • Resolution: 0.01 hPa or better • Missuring Range: 0-100 m/s or better • Measuring Range: 0-100 m/s or better • Mind Speed: • Measuring Range: 0-100 m/s or better • Wind Direction: • Measuring Range: 0-100 m/s or better • General Specifications: • Starting Wind Speed : 1 m/s. or better • General Specifications: • Starting Wind Speed : 1 m/s. or better • Survival Wind Speed : 1 m/s. or better • Resolution: 0.1 mm. • Protection: 1P65		-	
humidity area so should be able to withstand harsh climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to \pm 70°C or better • Accuracy: \pm 0.4°C (over the range -40 to \pm 70°C) / \pm 0.3°C (over the range -20°C to \pm 60°C) or better • Resolution: 0.001°C or better Relative Humidity: • Measurement Range: 0 - 100 % • Accuracy: \pm 1.8% (at 25°C, over the range 0 to 80% RH) / \pm 3% (at 25°C, over the range 0 to 80% RH) / \pm 3% (at 25°C, over the range 0 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 - 1100 hPa or better • Accuracy: \pm 0.5 hPa (@ \pm 20°C) / \pm 1.0 hPa (@ 0° C to 10 40°C) / \pm 1.5 hPa (@ \pm 20° C to \pm 50°C) / \pm 2.0 hPa (@ \pm 40° C to \pm 60°C or better • Resolution: 0.01 hPa or better Wind Speed & amp: Direction: • IP Protection Rating 65 • Wind Speed: • Measuring Range: 0.100 m/s or better • Accuracy: \pm 1.1% of measured value or better • Accuracy: \pm 1.1% of measured value or better • Resolution: 0.1m's or better • Wind Direction: • Measuring Range: 0.100 m/s (324kph, 200mph) • Distance constant (Delay distance): \pm 1; $5m$ • Operating temperature: \pm 0°C to \pm 50°C Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 mm. • Protection: IP65 01 Net Radiometer (4 Component):			
climatic condition. The entire system should be solar powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to +70°C) / ±0.3°C (over the range -20°C to +60°C) or better • Accuracy: ±0.4°C (over the range -40 to +70°C) / ±0.3°C (over the range -20°C to +60°C) or better • Resolution: 0.001°C or better Relative Humidity: • Measurement Range: 0 – 100 % • Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 – 1100 hPa or better • Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to 40°C / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C to +60°C or better • Resolution: 0.01 hPa or better Wind Speed: • Measuring Range: 0.100 m/s or better • Measuring Range: 0.100 m/s or better • Measuring Range: 0.100 m/s or better • Wind Speed: • Measuring Range: 0.100 m/s or better • Wind Direction: • Measuring Range: 0.100 m/s or better • Starviau Wind Speed: 1 m/s. or better • Survival Wind Speed: 2 to 7 to +50°C Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 mm. • Protection: IP65 01 Net Radiometer (4 Component):			
powered. Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to +70°C or better • Accuracy: $\pm 0.4^{\circ}$ C (over the range -40 to +70°C) / $\pm 0.3^{\circ}$ C (over the range -20°C to +60°C) or better • Resolution: 0.001°C or better Relative Humidity: • Measurement Range: 0 – 100 % • Accuracy: $\pm 1.8^{\circ}$ 6 (at 25°C, over the range 0 to 80% RH) / $\pm 3\%$ (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: • Measurement Range: 600 – 1100 hPa or better • Accuracy: ± 0.5 hPa (@ $\pm 20^{\circ}$ C) / ± 1.0 hPa (@ 0° C to 40°C) / ± 1.5 hPa (@ $\pm 20^{\circ}$ C) to $\pm 50^{\circ}$ C) / ± 2.0 hPa (@ $\pm 40^{\circ}$ C to $\pm 60^{\circ}$ C or better • Resolution: 0.01 hPa or better Wind Speed & camp; Direction: • IP Protection Rating 65 • Wind Speed • Measuring Range: 0 ± 100 m/s or better • Accuracy: $\pm 11; 1\%$ of measured value or better • Accuracy: $\pm 11; 1\%$ of measured value or better • Accuracy: $\pm 11; 1\%$ of measured value or better • Wind Direction: • Measuring Range: 0 to 360° • Accuracy: 3° or better • General Specifications: • Starting Wind Speed: $\pm 1; 3m$ • Operating temperature: $\pm 50^{\circ}$ C to $\pm 50^{\circ}$ C Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 mX. • Protection: IP65 01 Net Radiometer (4 Component);		•	
Manufacturer Certificate Required from OEM Temperature: • Measurement Range: -40 to $+70^{\circ}$ C or better • Accuracy: $\pm 0.4^{\circ}$ C (over the range -40 to $+70^{\circ}$ C) / $\pm 0.3^{\circ}$ C (over the range -20° C to $+60^{\circ}$ C) or better • Resolution: 0.00° C or better Relative Humidity: • Measurement Range: $0 - 100$ % • Accuracy: $\pm 1.8\%$ (at 25°C, over the range 0 to 80% RH) / $\pm 3\%$ (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: • Measurement Range: $600 - 1100$ hPa or better • Accuracy: ± 0.5 hPa (@ $\pm 20^{\circ}$ C) / ± 1.0 hPa (@ 0° C to 40°C) / ± 1.5 hPa (@ $\pm 20^{\circ}$ C) to $\pm 50^{\circ}$ C) / ± 2.0 hPa (@ $\pm 40^{\circ}$ C to $\pm 60^{\circ}$ C or better • Resolution: 0.01 hPa or better Wind Speed & C to $\pm 60^{\circ}$ C to $\pm 50^{\circ}$ C) / ± 2.0 hPa (@ $\pm 40^{\circ}$ • Wind Speed & C to • Wind Speed & C to • Wind Speed: • Measuring Range: 0.100 m/s or better • Wind Direction: • Measuring Range: 0.360° • Accuracy: $\frac{3}{2}$ or better • Survival Wind Speed 11 m/s. or better • Survival Wind Speed 11 m/s. or better • Survival Wind Speed 21 m/s. or better • Principle: Tipping Bucket • Resolution: 0.1 m. • Protection: IP65 01 Net Radiometer (4 Component);			
 Temperature: Measurement Range: -40 to +70°C or better Accuracy: ±0.4°C (over the range -40 to +70°C)/ ±0.3°C (over the range -20°C to +60°C) or better Resolution: 0.001°C or better Relative Humidity: Measurement Range: 0 - 100 % Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 0 to 100% RH) or better Barometric Pressure: Measurement Range: 600 - 1100 hPa or better Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to 40°C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C to +60°C or better Resolution: 0.01 hPa or better Wind Speed & amp; Direction: IP Protection Rating 65 Wind Speed: Measuring Range: 0-100 m/s or better Accuracy: ±1.1% of measured value or better Resolution: 0.1 m/s or better Wind Direction: Measuring Range: 0 to 360° Accuracy: 3° or better General Specifications: Starting Wind Speed: 1 m/s, or better Survival Wind Speed: 1 m/s, or better Survival Wind Speed: 2 1 m/s, or better Survival Wind Speed: 2 1 m/s, or better Survival Wind Speed: 2 1 m/s, or better Portection: Pitsiane constant (Delay distance): & 11;3m Operating temperature: -50°C to +50°C Rain Gauge: Principle: Tipping Bucket Resolution: 0.1 m. Protection: IP65 N Net Radiometer (4 Component); 		•	
 Measurement Range: -40 to +70°C or better Accuracy: ±0.4°C (over the range -40°C to +70°C) / ±0.3°C (over the range =20°C to +60°C) or better Resolution: 0.001° C or better Relative Humidity: Measurement Range: 0 – 100 % Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: Measurement Range: 600 – 1100 hPa or better Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to 40°C() / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ - 40° C to +60°C or better Resolution: 0.01 hPa or better Resolution: 0.01 hPa or better Wind Speed: Measuring Range: 0-100 m/s or better Accuracy: &tl 1% of measured value or better Resolution: 0.1m/s or better Wind Speed: Measuring Range: 0 to 360° Accuracy: &tl 1% of measured value or better Resolution: 0.1m/s or better General Specifications: Starting Wind Speed: 1 m/s. or better Survival Wind Speed: 2 m/s. or better General Specifications: Starting Wind Speed: 1 m/s. or better General Specifications: Starting Wind Speed: 1 m/s. or better General Specifications: Porticing temperature: -50°C to +50°C Rain Gauge: Principle: Tipping Bucket Resolution: 0.1 mm. Protection: 1P65 Net Radiometer (4 Component): 		-	
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 Resolution: 0.001° C or better Relative Humidity: Measurement Range: 0 – 100 % Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: Measurement Range: 600 – 1100 hPa or better Accuracy: ±0.5 hPa (@ ±20°C) / ±1.0 hPa (@ 0° C to 50°C) / ±1.0 hPa (@ 0° C to 50°C) / ±1.5 hPa (@ -20° C to ±50°C) / ±2.0 hPa (@ - 40° C to ±60°C or better Resolution: 0.01 hPa or better Wind Speed & amp: Direction: IP Protection Rating 65 Wind Speed: Measuring Range: 0-100 m/s or better Resolution: 0.1% or better Resolution: 0.1% or better Accuracy: & k1;1% of measured value or better Resolution: 0.1% or better Wind Speed: Wind Speed: 10 360° Accuracy: 3° or better General Specifications: Starting Wind Speed: 1 m/s. or better Survival Wind Speed: 2;90m/s (224kph, 200mph) Distance constant (Delay distance): & k1 t;3m Operating temperature: -50°C to +50°C Rain Gauge: Principle: Tipping Bucket Resolution: 0.1 mm. Protection: IP65 Net Radiometer (4 Component): 		- · · · ·	
Relative Humidity:• Measurement Range: $0 - 100 \%$ • Accuracy: $\pm 1.8\%$ (at 25°C, over the range 0 to 80%RH) / $\pm 3\%$ (at 25°C, over the range 80 to 100% RH) orbetterBarometric Pressure:• Measurement Range: $600 - 1100$ hPa or better• Accuracy: ± 0.5 hPa ($@ +20^{\circ}$ C) / ± 1.0 hPa ($@ 0^{\circ}$ C to 40° C) / ± 1.5 hPa ($@ -20^{\circ}$ C to $+50^{\circ}$ C) / ± 2.0 hPa ($@ -40^{\circ}$ C to $+60^{\circ}$ C or better• Resolution: 0.01 hPa or betterWind Speed & amp; Direction:• IP Protection Rating 65• Wind Speed:• Measuring Range: 0-100 m/s or better• Accuracy: $\pm 0.11\%$ or botter• Measuring Range: 0 to 360° • Accuracy: $\pm 0.11\%$ or better• Wind Direction:• Measuring Range: 0 to 360° • Accuracy: 3° or better• General Specifications:• Starting Wind Speed : 1 m/s. or better• Gorental Specifications:• Starting Wind Speed : 2 gt; 90m/s (324kph, 200mph)• Distance constant (Delay distance): & lt; 3m• Operating temperature: -50° C to $+50^{\circ}$ CRain Gauge:• Principle: Tipping Bucket• Resolution: 0.1 mm.• Protection: IP6501Net Radiometer (4 Component):			
 Measurement Range: 0 – 100 % Accuracy: ±1.8% (at 25°C, over the range 0 to 80% RH) / ±3% (at 25°C, over the range 80 to 100% RH) or better Barometric Pressure: Measurement Range: 600 – 1100 hPa or better Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to 40°C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ -40° C to +60°C or better Resolution: 0.01 hPa or better Wind Speed: Measuring Range: 0-100 m/s or better Accuracy: ±1, % of measured value or better Resolution: 0. 1m/s or better Wind Direction: Wind Direction: Measuring Range: 0 to 360° Accuracy: 30 or better General Specifications: Starting Wind Speed: 1 m/s, or better General Specifications: Starting Wind Speed: 324kph, 200mph) Distance constant (Delay distance): &l t;3m Operating temperature: -50°C to +50°C Rain Gauge: Principle: Tipping Bucket Resolution: 0. mm. Protection: IP65 Net Radiometer (4 Component): 			
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 better Barometric Pressure: Measurement Range: 600 - 1100 hPa or better Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to 40°C() / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ -40° C to +60°C or better Resolution: 0.01 hPa or better Wind Speed & amp; Direction: IP Protection Rating 65 Wind Speed: Measuring Range: 0-100 m/s or better Accuracy: < 1% of measured value or better Resolution: 0.1m/s or better Measuring Range: 0 to 360° Accuracy: 3° or better General Specifications: Starting Wind Speed: & gt;90m/s (324kph, 200mph) Distance constant (Delay distance): < 3m Operating temperature: -50°C to +50°C Rain Gauge: Principle: Tipping Bucket Resolution: 0.1 mm. Protection: IP65 01 Net Radiometer (4 Component): 		• Accuracy: $\pm 1.8\%$ (at 25°C, over the range 0 to 80%)	
Barometric Pressure: • Measurement Range: $600 - 1100$ hPa or better • Accuracy: ± 0.5 hPa (@ $+20^{\circ}$ C) / ± 1.0 hPa (@ 0° C to 40° C) / ± 1.5 hPa (@ -20° C to $+50^{\circ}$ C) / ± 2.0 hPa (@ -40° C to $+60^{\circ}$ C or better • Resolution: 0.01 hPa or better Wind Speed & amp; Direction: • IP Protection Rating 65 • Wind Speed: • Measuring Range: $0-100$ m/s or better • Accuracy: $\<1\%$ of measured value or better • Accuracy: $\<1\%$ of measured value or better • Resolution: 0.1m/s or better • Wind Direction: • Measuring Range: 0 to 360° • Accuracy: 3° or better • General Specifications: • Starting Wind Speed : 1 m/s. or better • Survival Wind Speed : $\&$ gt;90m/s (324 kph, 200mph) • Distance constant (Delay distance): $\<1;3m$ • Operating temperature: -50° C to $+50^{\circ}$ C Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 mm. • Protection: IP65 01 Net Radiometer (4 Component):		RH) / \pm 3% (at 25°C, over the range 80 to 100% RH) or	
 Measurement Range: 600 – 1100 hPa or better Accuracy: ±0.5 hPa (@ +20°C) / ±1.0 hPa (@ 0° C to (0° C) / ±1.5 hPa (@ -20° C to +50°C) / ±2.0 hPa (@ -40°) C to +60°C or better Resolution: 0.01 hPa or better Wind Speed & amp; Direction: IP Protection Rating 65 Wind Speed: Measuring Range: 0-100 m/s or better Resolution: 0.1 m/s or better Wind Direction: Measuring Range: 0 to 360° Accuracy: 3° or better General Specifications: Starting Wind Speed: 1 m/s. or better Starting Wind Speed: & gt;90m/s (324kph, 200mph) Distance constant (Delay distance): &l t;3m Operating temperature: -50°C to +50°C Rain Gauge: Principle: Tipping Bucket Resolution: 0.1 mm. Protection: 1P65 Net Radiometer (4 Component): 		better	
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Wind Speed & amp; Direction:• IP Protection Rating 65• Wind Speed:• Measuring Range: 0-100 m/s or better• Accuracy: & lt; 1% of measured value or better• Resolution: 0.1m/s or better• Wind Direction:• Measuring Range: 0 to 360°• Accuracy: 3° or better• General Specifications:• Starting Wind Speed :1 m/s. or better• Survival Wind Speed: & gt;90m/s (324kph, 200mph)• Distance constant (Delay distance): &l t;3m• Operating temperature: -50°C to +50°CRain Gauge:• Principle: Tipping Bucket• Resolution: 0.1 mm.• Protection: IP6501Net Radiometer (4 Component):			
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Rain Gauge: • Principle: Tipping Bucket • Resolution: 0.1 mm. • Protection: IP65 01 Net Radiometer (4 Component):		· · ·	
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Page 32 of AA		Net Radiometer (4 Component):	 00 0 1 1

 Response Time: 1 s Pyranometer: Spectral Range: 385 to 2105 nm Uncertainty in Daily Total. & Rit; 5% Irradiance: 0 to 2000 Wrm¹. Field of View: Upper detector: 180° Unver detector: 150° Directional error: & Rit; 35 Wrm² Pyrgeometer: Spectral Range: 5 to 30 µm Uncertainty in Daily Total&Rit 10% Output Range: ±24 mV (The output range is typical for atmospheric applications.) Soil Moisture & Amp: Temperature: Measurements Made: Volumetric water content (VWC), permittivity, electrical conductivity (EC), and temperature Instantiation Torque: 54 N m (40 ft-lb) Operating Temperature Range: ±0° to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Temperature Range: ±1.5% (full range) Volage Range: 9 to 36 Vde Measurement Made: Volumetric water content (VWC), total of 0.00% Volage Range: 9 to 36 Vde Measurement Deprive: Up to IM (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range : 0 to 10 dS/m Accuracy: 22% (0 to 2.5 dS/m) ±5% (full range) Volage Range: 30 100 K/m Water Content Accuracy : ±1.5% typical with most soils Soils with high organic matter (Agt; 12% soil organic carbon) or high clay content (Agt; 4.5% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: : 0.15°C (between -30° and i-40°C) Data Sampling Rate: 1000 HZ Analog Input Channels: 16 Nos Analog Input Annels: 16 Nod?, no des Man ± (Undewise input ranges adog with 'Autor-Ranging''' facility to measure the sensors accurately without an	- D T' 1	
 • Spectral Range: 385 to 2105 mm • Incertainty in Daily Total: & K1; 5% • Frield of view: • Upper detector: 180° • Lower detector: 180° • Directional error: & K1; 35 W/m² • Pyrgeometer: • Spectral Range: 5 to 30 µm • Uncertainty in Daily Total&K1 10% • Output Range: ±24 mV (The output range is typical for an unsopheric applications.) Soil Moisture & Amp; Temperature: Measurements Made: Volumetric water content (VWC), permittivity, electrical conductivity (EQ), and temperature Operating Temperature Range: ±40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: ±40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: ±40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: ±40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-1b) Operating to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetic water Content: Range 0 to 100 dS/m Kater Content Accuracy ± ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) of high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: Pata Logger Specification: Pata Logger	• Response Time: 1 s	
 Uncertainty in Daily Total: < 5% Irradiance: 10 a 2000 Winf. Field of view: Upper detector: 180° Lower detector: 150° Directional error. < 33 W/m² Pyrgeometer: Spectral Range: 5 to 30 µm Uncertainty in Daily Total< 10% Output Range: ±24 mV (The output range is typical for atmospheric applications.) Soil Moisture & Amp; Temperature: Measurements Made: Volumetric water content (VWC), permittivity, electrical conductivity (EC), and temperature [measurements Made: Volumetric water content (VWC), permittivity, electrical conductivity (EC), and temperature 30 Voltage Range: 9 to 36 Vdc Measurements Depth: Up to 1M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 9 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 10 dS/m Water Content: Accuracy : ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (herween -30° and +40°C) Data Logger Specification: Phas Sampling Rate: 1000 Hz Analog Input Channels: 16 Nos Analog Input Channels: 16 Nos		
 Irradiance; 0 to 2000 W/m²; Field of view; Upper detector: 180^o Directional error: < 35 W/m² Pyrgeometer: Spectral Range: 5 to 30 µm Uncertainty in Daily Total< 10% Output Range: ±24 mV (The output range is typical for for atmospheric applications.) Soil Moisture & amp: Temperature: Measurements Made: Volumetric water content (VWC), permittivily, electrical conductivity (EC), and temperature Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-fb) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-fb) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-fb) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-fb) Operating Torque: 54 N m (40 ft-fb) Operating Torque: 54 N m (40 ft-fb) Operating to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Voltage Range: 9 to 36 Vde Water Content: Range to to 10 dS/m Accuracy: ±2% (10 to 2.5 dS/m) ±5% (typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high clay content (> 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: Pata Rampling Rate: 1000 Hz Analog Input Range: The datalogger should have multiple input ranges along with "Auto-Ranging" facility to massue the sensors accurately without any Loss of accuracy. The datalogger should these input ranges: ±50000 NU, ±100000, ±20000 V		
 Field of view: Upper detector: 180° Lower detector: 180° Lower detector: 180° Directional error. &II: 35 W/m² Pyrgeometer: Spectral Range: 50 30 µm Uncertainty in Daily Total&It 10% Otuptu Range: ±24 mV (The output range is typical for atmospheric applications.) Soil Moisture & Amp: Temperature: Measurements Made: Volumetric water content (WVC), permittivity, electrical conductivity (EC), and temperature Temperature Range: -40° to +60° C Maximum Installation Torque: 54 N m (40 fc·lb) Operating Temperature Range: -40° to +60° C Maximum Installation Torque: 54 N m (40 fc·lb) Operating Voltage Range: 9 to 36 Vdc Measurement Depth: Up to IM (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 10 to 10 dS/m Accuracy: ±20, 00 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range: 10 to 10 dS/m Accuracy: ±0.10 (to 2.5 dS/m)) ±5% (full range) Volumetric water Content: Range to 100% Wate Content Accuracy : ±1.5% typical with most solis Solis with high organic matter (&gr 12% soil organic carbon) or high clay content (&gr 45%, clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: Data Sampling Rate: 1000 Hz Analog Input Channels:16 Nos Analog Input Accuracy. The datalogger should have multiple input ranges along with "Auto-Ranging" facility to measure the sensors accurately without any loss of racuracy. The datalogge		
 Upper detector: 180° Lower detector: 150° Directional error. &It 35 W/m² Pyrgeometer: Spectral Range: 5 to 30 µm Uncertainty in Daily Total&It 10% Output Range: ±24 mV (The output range is typical for atmospheric applications.) Soil Moisture & amp: Temperature: Measurements Made: Volumetric water content (VWC), permittivity, electrical conductivity (EC), and temperature Operating Temperature Range: :40° to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Voltage Range: 9 to 36 Vde Measurement Depth: Up to 1M (5, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±2% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Accuracy: ±1.5% typical with most soils Soils with high organic matter (&g 12% soil organic cathon) of high clay content (&g 45% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Tormeyrature: Accuracy: ±1.5% (boger should have multiple input ranges along with 'Auto-Ranging'' Ifacility to measure the sensors accurately without any loss of accuracy. ±1000 MZ Analog Input Range: 116 datalogger should have multiple input ranges along with Accuracy to along 'Accuracy' to 300 MZ Analog Input Range: 116 datalogger should have multiple input ranges along with a curacy or a construct water were meter and these input ranges: ±5000 V, ±1000 MZ, ±200 MZ Analog Input Gause: 116 datalogger should have multiple input ranges along with a curacy or a construct waterement accuracy to 15 Nos Analog Input Gause: 116 datalogger should have multiple input ranges along with 'Auto-Ranging'' Ideitiy to measure the sensors accurately without any loss of accuracy. The datalogger should have multiple input ranges along with 'A		
 Lower detector: 150° Directional error: & kl; 35 W/n² Pyrgeometer: Spectral Range: 5:0 30 µm Uncertainty in Daily Total&kl 10% Output Range: ±24 mV (The output range is typical for atmospheric applications.) Soil Moistner & Aamy: Temperature: Measurements Made: Volumetric water content (WCC), permittivity, electrical conductivity (EC), and temperature Operating Temperature Range: ±40° to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Temperature Range: 40° to +60°C Maximum Installation Torque: 54 N m (40 ft-lb) Operating Temperature (10, 10, 20, 30, 40, 50, 60, 75, and 100 cm) EC: Range: 0 to 10 dS/m Accuracy: ±25% (0 to 2.5 dS/m) ±5% (full range) Volumetric water Content: Range 0 to 100% Water Content Accuracy : ±1.5% typical with most soils Soils with high organic matter (> 12% soil organic carbon) or high elay content (> 43% clay) may need a soil-specific calibration due to the dispersive nature of these materials. Soil Temperature: Accuracy: ±0.15°C (between -30° and +40°C) Data Logger Specification: Data Logger Specification: Data Logger Specification: Tota Logger Specification: Totat Sampling Rate: 1000 Hz Analog Input Range: The datalogger should have multiple input Range: The dataloger should have input ranges also Routom v, ±200mV Analog Input Range: The dataloger should have input ranges also voltage Analog Resolution: 0.		
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configurable voltage sources that can operate in at least		
one of two modes. Switched Excitation Mode, a single		
16-bit digital-to-analog converter (DAC), provides a	16-bit digital-to-analog converter (DAC), provides a	

 user-specified voltage during measurement only. Switched Regulated Voltage Supply Mode, provides continuous 3.3 Vdc or 5 Vdc. Pulse Counting Channel: At least two inputs individually configurable for switch closure, high-frequency pulse, or low-level AC measurements. Independent 32-bit counter for each input. Switch Closure Inputs with Minimum Switch Closed Time: 5 ms, Minimum Switch Open Time: 6 ms, Maximum Bounce Time: 1 ms open without being counted. Digital: At least eight ports configurable for digital input and output including status high/low, pulse width modulation, external interrupt, edge timing, switch closure, pulse counting, high-frequency pulse 	
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modulation, external interrupt, edge timing, switch closure, pulse counting, high-frequency pulse	
closure, pulse counting, high-frequency pulse	
counting,	
UART, RS-232, RS-485, SDI-12, I2C.	
Resistive Ground. At least two resistance-to-ground	
inputs that can be used for non-isolated 0-20 mA and	
4-	
20 mA current loop measurements or for terminating	
the ground refence of an RS-485 serial connection.	
Analog to Digital Conversion Bits: 24 Bit or Better	
 Analog to Digital Conversion Accuracy +/-1 LSB 	
• User selectable average time of 1 min/10minutes,	
independently for each channel.	
Minimum Parameters to be recorded for Each	
Channel:	
Average, Standard Deviation, Minimum, Maximum,	
Wind Vector.	
• The DCP should have watchdog timer to reset the	
system and restore the previous set-up case of	
microprocessor resets and power glitch.	
• The normal time clock of the system should be	
derived	
from TCXO with accuracy of 3.0 ppm/yr.	
• In addition, the system should also have battery	
backed	
real time clock so that the time is updated even during	
power failure.	
• The accuracy of this clock should be better than 3	
minutes in six-months periods.	
• Communication Interface: USB: Micro-B, RS-232,	
RJ-45: Ethernet	
Communication Protocols: SDI-12, Modbus, DTU(ASCH/TCD_DND2_NTCD_NMEA_0182_12C)	
RTU/ASCII/TCP, DNP3, NTCIP, NMEA 0183, I2C, SPL Custom uson definable over serial TCP, UDP	
SPI, Custom user definable over serial, TCP, UDP.	
Communication port (for configuration): Ethernet port/SD cord/USB port/Davice keypad	
port/SD card/USB port/Device keypadReal Time Data Acquisition Mode: Through Local	
• Real Time Data Acquisition Mode: Through Local Intranet and RS485 Mode	
Data Storage: Internal memory should be capable of	
storing minimum 1 Week data at 20 Hz interval.	
• Data Storage Expansion: Removable micro–SD Flash	
memory; up to 16 GB	
• Data File Formats: CSV, XML, JSON, binary,	
encrypted, custom user definable.	
Power Requirements: Typical Current Drain in Sleep	
Mode: ~2 mA or better 1 Hz Scan (8 diff. meas. 60 Hz	
rej., 2 pulse meas.): 3 mA. 12 V switched DC with	

	 maximum current supplying capacity of 1.0A during measurement period for powering up the sensors. Short circuit and overload protection. Temperature Range: -40 to +70° C. Operating Humidity Range: 0 to 100% relative humidity noncondensing Weight: ≤2 Kg Supply Voltage: 9 to 36 V DC Voltage Input Protection: Reverse polarity protected; overvoltage protected up to 30 Vdc. 	
Warranty	From the supplier for a period of 12 months from the date of installation	

(Signature of the Tenderer with stamp of firm with Date)

FINANCIAL BID / BOQ

(On letter head of Firm/ Agency)

Price Quoted by firm/ agency (in Rupees)

"SUPPLY & INSTALLATION OF SURFACE OBSERVATORY ALONGWITH AUTOMATIC WEATHER STATION ATCENTRAL UNIVERSITY OF JHARKHAND, RANCHI"

Sl. No.	Name of Items	Quantity/ Duration	Make/ Model	Unit Rate/ Annual Rate for AMC	GST or any Taxes as applicable	Total
1	Surface observatory	01 No.				
1.	Automatic weather station	01 No.				
2.	Grand Total (Inclusive of all taxes)					
	(in Words)					

<u>Note</u>:

(a) The Firm/Agency must quote unit rate.

(b) Order shall be placed on the party who quotes over all lowest **Grand Total** (Inclusive of all taxes).

(c) In case of confusion of unit rate against total price, unit rate will prevail forevaluation

(d) In case of confusion in word and figures in quoted rate / total price of any item, rate / total price quoted <u>in words</u> will prevail. Similarly in case of confusion in word and figures in overall price, price quoted in words willprevail.

(e) The quantity of mentioned above items may be increase / decrease as per the requirement of the University.

(Signature of the Bidder with stamp of Firm with Date)

NATIONAL ELECTRONIC FUNDS TRANSFER (NEFT) - MANDATE FORM

(1)	Name of Account holder:
(2)	Bank Name:
(3)	Bank Branch Address:
(4)	Account Type: Savings/Current/Cash Credit/NRI
(5)	Account No (Bank account number should be written from left to right)
(6)	IFS Code:
(7)	MICR Code. :
(8)	Bank Registered Mobile number:
(9)	Bank Registered E-Mail Id:

Signature of the Account holder

Date: _____

Enclosure:-

(a) Cancelled cheque leaf

0r

(b) if cheque is not having the name of bank holder then Photo copy of the page of Bank pass book containing details of Bank accounts number, IFS code etc.

DECLARATION BY THE BIDDER

(To be executed & attested by Public Notary / Executive Magistrate on Non-Judicial Stamp paper of Rs. 100/- by thebidder)

I/We____ Proprietor/ authorized dealer of M/s______dohereby declare following, that : -

1. The firm/ company namelyM/s____has not been blacklistedor debarred in the past by Central / State Government or Central / State Government funded/ governed/ controlled organization from taking part in any Government tenders inIndia.

2. Neither myself nor any of my family members are employee of the Central University of Jharkhand.

3. I/ We do accept all the terms and conditions of the tender documents towards "Tender for supply and installation of **Surface observatory alongwith automatic weather station**at Central University of Jharkhand, Ranchi".

4. I/We have not involved in any litigation/ arbitration with Central / State Government or Central / State Government funded/ governed/ controlled organization at present or during the last five years. (if yes, the details of parties concerned and disputed amount are as follows : _____).

5. All services shall be performed by persons qualified and experienced in performing such services.

6. I/We shall be available to contact at all times (24 X 07 Hrs a day) and message sent by WhatsApp, SMS, Email, Fax or any Special Messenger from University to the supplier shall be acknowledged immediately on receipt on the same day.

7. I/We shall not engaged an Agent or paid commission or influenced any person to obtain the contract as described in clauses relating to Agents/Agency Commission and penalty for use of undue influence, the firm/agency, on a specific request of the University, shall provide necessary information/ inspection of the relevant financial documents/information.

8. The information furnished in the Technical bid is true, complete and correct to the best of my knowledge and belief, I undertake that in the event of any information being found fake or false at any stage, my tender/ order shall be liable to be cancelled / terminated without any notice or compensation in lieu thereof shall be given.

9. In case the above information found false, I / We are fully aware that the tender/order/ contract will be rejected/ cancelled by the Central University of Jharkhand, Bid Security / Performance Security shall be forfeited and will be debarred from any future tendering process for a period **upto 03 Years**. Pay the penalty as fixed by the University in addition to forfeiture of the performance guarantee for causing administrative inconvenience to the University.

10. The University may also initiate the process of blacklisting our firm/agency for the breach of contract.In addition to the above, Central University of Jharkhand, will not be responsible to pay the bills for any completed/ partially supplied items/ work.

Deponent

W	itness:-

1. 2.

Name		
Address		
Attested:		

<u> Format - VI</u>

FORMAT OF BANK GUARANTEE FORM

• This guarantee should be furnished by a Nationalized Bank / Scheduled Bank, authorized by RBI to issue a Bank Guarantee.

- This bank guarantee should be furnished on **stamp paper ofRs. 100/-**
- The stamp paper should have been purchased in the Name of the Bank executing the Guarantee.

• In the case of foreign bidder, the B.G may be furnished by an international reputed bank acceptable to the Purchaser countersigned by any Nationalized / Scheduled Bank in India authorized by Reserve Bank of India.

PERFORMANCE BANK GUARANTEE

3. We undertake to pay to the CUJ any money so demanded notwithstanding any dispute or disputes raised by the supplier in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal. The payment so made by us under this bond shall be valid and discharge of our liability for payment there under and the Supplier shall have no claim against us for making such payment.

4. We the Bank further agree that the guarantee herein contained shall remain in full force and affect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the CUJ under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till Registrar on behalf of the CUJ certified that the terms and conditions of the said Agreement have been fully and properly carried out by the said and accordingly discharges this guarantee.

 being granted to the said supplier or for any forbearance act or omission on the part of the CUJ or any indulgence by the CUJ to the said supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

6. This guarantee will not be discharged due to change in the constitution of the bank or the supplier.

7. We, the Bank lastly undertakes not to revoke this guarantee except with the previous consent of the CUJ in writing.

8. This guarantee shall be valid up tounless extended on demand byCUJ. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs.....(Rupees.......only).

Notwithstanding anything contained herein

1. Our liability under this bank guarantee shallnot exceed Rs...... (Rupees.....only)

2. Bank guarantee shall be valid upto.....

3. We are liable to pay the guaranteed amount or part thereof under this bank guarantee onlyand only if you serve upon us a written claim or demand on or before.....

Dated:

Signature & Seal of the Bank

Note: The above format contains specific clauses and expressions. These clauses and expressions can vary depending upon the nature / type of agreement and situation. Basic aspect to be kept in mind is that interest of CUJ is fully protected.

Bid Securing Declaration Form

(Letter head of Firm/ Agency)

Date

Tender No.....

To Prof. Manoj Kumar, The PI, DST-FIST & Head DEVS Central University of Jharkhand Brambe Ranchi – 835 205

We, the undersigned, declare that:

We, M/s (herein referred as bidder) understand that, according to bid clause, bids may be supported with a Bid Securing Declaration, bidder render the declaration that:-

Bidder will automatically be suspended from being eligible for bidding in any contract with the Central University of Jharkhand (herein referred as Purchaser) **for the period of one year**, starting on bid submission closing date, if bidder are in breach of any of the following obligation(s) under the bid conditions:-

- (a) The bidder fails to supply the ordered item as per the supply/ purchase order, or
- (b) In the event of withdrawal of offer during the validity period, or
- (c) Non-confirmation of acceptance of the letter of intent/ purchase order within the stipulated time after issue of the letter of intent/ work order by the University, or
- (d) The successful bidder fails to furnish the required Performance Security **within 30 days** on receipt of notification of award of work order from the University, or
- (e) The bidder withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of the tender

Bidder understand that this declaration shall expire, if Bidder is not the successful bidder and on receipt of purchaser's notification of the award to another Bidder; or 45 days after the validity of the Bid' whichever is later.

(Signature) Authorized Signatory Name : _____

Designation : _____

Office Seal : _____

Place :

Date :

CERTIFICATE OFWARRANTY

(To be given on Company Letter Head)

1. I / We, ______, certify that the ComprehensiveWarranty shall be for a period of **01 year** (as applicable) starting from the date of satisfactory supply and installation of **Surface observatory alongwith automatic weather station**at Central University of Jharkhand, Ranchi and of the works conducted therewith covered under the Supply order. During the warranty period, I/we shall provide free "after sale service/ support" and the replacement of any part(s) of the equipment or rectification of defects of work of the equipment will be free of cost. The replacement of the parts shall be arranged by us, at our own cost and responsibility. The benefit of change in dates of the warranty period shall be in the interest of the user/yourorganization.

2. We shall try to repair the **Surface observatory alongwith automatic weather station**atuniversity premises itself. However, the **Surface observatory alongwith automatic weather station**will be taken to our site on our own expenses in case it is not possible to repair the same at university premises. We shall take the entire responsibility for the safe custody and transportation of the **Surface observatory alongwith automatic weather station**taken out for repairs till the **Surface observatory alongwith automatic weather station**taken out for repairs till the **Surface observatory alongwith automatic weather station**taken out for repairs till the **Surface observatory alongwith automatic weather station**taken out for repairs the same at observatory alongwith automatic weather station is rehabilitated to the University after repair. Any loss of **Surface observatory alongwith automatic weather station** its accessories under its charge on account of theft, fire or any other reasons shall be at our sole risk and responsibility which will be compensated to university for such losses.

3. We warranty that in case we fail to carry out the maintenance within the stipulated period, University reserves the right to get the maintenance work carried out at our risk, cost and responsibility after informing us. All the expenses including excess payment for repairs/maintenance shall be adjusted against the Performance Bank Guarantee. In case the expenses exceed the amount of Performance Bank Guarantee, the same shall be recoverable from us with/without interest in accordance with the circumstances. We also warranty that in case we fail to carry out the maintenance within the stipulated period, we shall provide same/ similar equipment for seamless execution of university function for the period of maintenance.

4. We undertake to perform calibration after every major repair/breakdown/taking the **Surface observatory alongwith automatic weather station** for repair out of university premises.

5. We warranty the entire unit against defects of manufacture, workmanship and poor quality of components.

6. We warrantythat we will supply spare parts if and when required on agreed basis for an agreed price. The agreed basis could be an agreed discount on the published catalogue price.

7. We shall warranty that any Material supplied hereunder shall conform to the generally recognized manufacturing and safety standards of the Vendor's industry as per Indian Standard Institution (ISI)/ Indian Standard (IS) or similar standard. The Vendor's specifications on performance as detailed in the Vendor's brochures, sales literature and other specifications as may be available to the university.

8. We warranty to the effect that before going out of production of spare parts, we will give adequate advance notice to you so that you may undertake to procure the balance of the life time requirements of spare parts.

9. We warranty the entire unit against defects of manufacture, workmanship and poor quality of components.

10. Section VI (para 03) of General Condition of Contract shall also form part of the warranty terms and conditions.

11. Rights granted to the University in this article entitled WARRANTIES are in addition to any other rights or remedies provided elsewhere in this order or in Law.

(Signature of the Tenderer with stamp of firm with Date)

TENDER ACCEPTANCE LETTER

(To be given on Company Letter Head)

Date:....

To Prof. Manoj Kumar, The PI, DST-FIST & Head DEVS Central University of Jharkhand Brambe Ranchi – 835 205

Sub: Acceptance of Terms & Conditions of Tender.

Reference No. :....

Name of Tender / Work:

.....

Sir/Madam,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned "Tender/Work" from the web site(s)namely:.....

..... as per your advertisement, given in the above-mentioned website(s).

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No......to(including all documents like annexure(s), schedule(s), etc .,), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organisation to have also been taken into consideration, while submitting this acceptanceletter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) /corrigendum(s) in its totality /entirety.

5. I / We do hereby declare that our Firm has not been blacklisted/ debarred by any Govt. Department/Public sector undertaking.

6. I / We certify that all information furnished by the our Firm is true & correct and in the event that the information is found to be incorrect/untrue or found violated, then your department/ organisation shall without giving any notice or reason therefore or summarily reject the bid or terminate the contract, without prejudice to any other rights or remedy including the forfeiture of the full said earnest money deposit absolutely.

Yours Faithfully,

(Signature of the Bidder, with Official Seal)