



तेजपुर विश्वविद्यालय / TEZPUR UNIVERSITY

(संसद के अधिनियम द्वारा स्थापित केंद्रीय विश्वविद्यालय)

(A Central University established by an Act of Parliament)

कुल सचिव का कार्यालय/ OFFICE OF THE REGISTRAR

नपाम :: तेजपुर - 784028 :: असम

NAPAAM :: TEZPUR - 784028 :: ASSAM

SHORT QUOTATION NOTICE

TU/11-24/Pur/Qtn/2017-18/1010-A dated: 02.06.2017

Sealed quotations are invited from reputed manufacturers/authorized dealers/vendors for supply, installation & commissioning etc. of following items required for the MNRE Project, Department of Energy, Tezpur University. Those who have submitted quotation in response to our earlier notice No. TU/11-24/Pur/Qtn/2017-18/316-A dated:26.04.2017 may submit their revised offer/quotation; and in such cases, Tender Fee and EMD need not be paid again.

Item with Specifications (Equipment):

Sl. No	Item	Specification
1	SPV Grid tied training system	Power generating Unit: Solar PV module Total power: 500 Wp Solar PV Grid Tied inverter: No. of Grid Tied Inverter at least -1; MPP voltage range: 45V to 100V; Rated grid voltage: 230 V Maximum output current: 2.5 A; Rated power: 300 W ; Rated frequency: 50 Hz; Feeding phases: single-phase; Measurement Unit: Isolated sensors; AC Voltage sensor; AC current sensor; power analysers-2; Ammeter- AC capacitor bank.
2	Solar thermal training system for flat plate collector	Collector Box: Length: 915mm; Breadth: 810mm; Glazing surface: toughen glass Absorber plate: absorber material (Copper) Control Unit: Temperature meter with sensors; pressure meter with sensor; flow meter with sensor; flow regulator Power rating: 3200 W; Wind speed range: 0 to 5 m/sec
3	Wind energy training system	Generating unit: Type: PMSG (3phase); power rating: 300 W; No. of rotor blades: 3; Swept area: 1.4 m ² ; Power generation at rated speed: 300 W; Cut-in speed: 3.5 m/sec; cut-out speed: 23 m/sec Blade length: 0.67 m with Artificial Wind generating Unit , control Unit etc.
4	Pyranometer	Well suitable for the measurement of incoming global solar radiation (0.3 μ m.....3 μ m spectral range), Typical sensitivity 10 μ V (W/m ²), Measuring range 0 to 2000 W/m ² . Spectral Field 305nm to 2800nm
5	Laminar flow meter	Standard specification
6	1C 4S Petrol Engine Test Rig with Rope Brake Dynamometer	1 cylinder, 4 stroke, Petrol engine test rig, Rope brake dynamometer
7	1C 4S Diesel Engine Test Rig with Electrical Dynamometer	1 cylinder, 4 stroke, Diesel Engine Test Rig with Electrical Dynamometer
8	Briquetting press	30 mm, Material Handling system



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9	Experimental set-up for Shell and Tube Heat Exchanger	Fully instrumented set up enabling to record temperatures profile along the flow (both tube and shell) and flow rates (with a provision for flow variation) with provision for estimation of heat transfer, heat transfer coefficients, effectiveness and NTU. The system should be operated both as parallel flow and counter flow types.
10	Experimental set-up for assessment of fin performance	Fully instrumented set up enabling to record temperatures profile along the fins (variable geometry and materials) with provision for estimation of heat transfer, heat transfer coefficients and fin effectiveness underforced and natural convection
11	Emissivity measuring apparatus	Fully instrumented set up enabling to record the standard parameters to estimate emissivity values of standard plates
12	Experimental set up for assessment of heat transfer coefficient for drop wise and film wise condensation	Fully instrumented set up enabling to record the standard parameters to estimate heat transfer coefficients for drop wise and film wise condensation
13	Experimental set up for estimation of critical heat flux in pool boiling of water	Fully instrumented set up enabling to record the standard parameters to estimate critical heat flux in pool boiling of water
14	Proximate analyzer	Volatile matter, Ash, Moisture content determination provision. Confirming to ASTM methods for biomass and coal. Sample 0.5 to 5gm, Temperature
15	Solar street light kit	Su-kam integrated LED street light 9 W, 26 W panel Battery life: Min 1 year, Solar charging-full sunlight: 8 hrs. Battery capacity: 5200 mAh
16	High temperature IR thermometer gun	Laser convergence distance: 127 cm IR range: -50 to 2200°C Repeatability: $\pm 0.5\%$ or 1°C Basic accuracy: $\pm(1\%$ of rdg +1°C) Max resolution: 0.1°C Emissivity: 0.10 to 1.00 adjustable Field of view (distance to target): 50:1 Type K range: -50 to 1370°C Memory: Manually store/recall 100 readings Dimensions/weight: 204×155×52 mm/320 g
17	Solar Air Dryer with hot water (100 LPD)	Collection area 1.5 sq. m; Cover: 4mm toughened glass; Insulation: three side thermally insulated; tilt angle: 45 degree fixed; air inflow: by blower; drawer: MS frame bottom SS wire mesh; discharge of moist air: through chimney air: discharge: into the bottom of drying chamber range : 0-1000 ° C
18	Temperature Data logger	Temperature range: 0-1700°C Accuracy= $\pm 0.5\%$ Channel: 4 data logging thermometer
19	Digital Luxmeter	Range (Lux):200000.0; Range (Foot candles): 20000 Fc Accuracy: $\pm 3\%$ Display: Large LCD Counts: 2000 Counts Temperature Characteristic: $\pm 0.1\%$ / °C
20	Digital Wattmeter	(50-1000)W

Item with Specifications (Software):

Sl. No	Item	Specification
1	Microcontroller development board	Model Easy 8051 v6



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2	Edraw Max, Edraw soft	Windows platform
3	Micro C for Pic processor	USB licence
4	HOMER software	
5	Fluent software	ANSYS Fluent

GENERAL TERMS & CONDITIONS:

1. No separate tender paper will be issued from the office; one should only download the specifications/List from the website.
2. **The rates should be preferably quoted in Indian Rupee and FOR Tezpur University, Napaam basis. Charges for clearing and transportation should be incurred by the supplier.**
3. *Quotations should be accompanied by i) An EMD (in the form of Demand Draft/Call Deposit/TDR) of ₹. 5000/- (Rupees Five Thousand) only drawn/pledged in favor of Registrar, Tezpur University, payable at Tezpur. **No request for consideration of earlier deposited EMD will be considered.** ii) A non refundable application (quotation) fee of ₹.1000.00 (Rupees One Thousand) only have to be paid only by Demand Draft drawn in favour of Registrar, Tezpur University payable at Tezpur.*
4. The rates should be exclusive of taxes and applicable tax % should be clearly indicated.
5. Applicable levies, surcharge and discounts should be clearly indicated itemwise.
6. Quoted rates should be valid at least for a period of 01 year.
7. The rates should be quoted along with supporting documents of specifications and technical features and list of users.
8. The system must be installed at the laboratory, and after installation a basic training must also be provided by the supplier or their Indian counterpart without any additional costs.
9. All the quotations must be accompanied with supporting documents and / or literature.
10. Demonstration may be sought from the vendors for authentication of quoted specification.
11. Details of availability of after sales support will have to be furnished. After sales support directly from manufacturer and from Assam (Guwahati / Tezpur) will be preferred.
12. The University is exempted from paying Custom and Excise duty.
13. Proprietary items should be quoted with sole Manufacturer/Distributorship certificate.
14. Warranty/Guarantee period should be specifically mentioned in the quotation.
15. No Advance payment will be made. However, for foreign supplier, advance payment will be made either by FDD/Wire Transfer/LC. In such cases 10% Performance Bank Guarantee should be submitted before issuing FDD/Wire Transfer/LC, covering the warranty period.
16. Performance Bank Guarantee also has to be submitted for Major equipments of Indian origin, covering the warranty period.
17. Items of Foreign origin should have Insurance up to installation on site.
18. The University reserves the right to accept or reject any or all the quotations without assigning any reason.
19. Quoted price should be inclusive of essential accessories and should be CIF Tezpur University, Tezpur
20. Applications for release of EMD should be submitted to the Registrar/ Joint Registrar.
21. Apart from the above terms and conditions the University has the right to include any other terms and conditions as and when felt necessary.
22. **Quotation should be submitted in the DROP BOX placed in the reception of the Administrative Building of the University latest by 5.30 PM of 22nd of June, 2017. If posted/couriered, should reach by 5.30 PM of 22nd of June, 2017 addressed to "The Joint Registrar, Tezpur University". The Quotation Notice No. and date should be clearly superscribed in the the envelope/packet containing the quotation.**

Sd/- Joint Registrar
Tezpur University