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Dated: 07.03.2018

SHORT TENDER NOTICE

Sealed competitive tenders are invited for the supply of the following items:

Sl. No.	Items	Qty
1	<u>Rotary Shaker</u> <ul style="list-style-type: none">• Speed range: 20 rpm to 300 rpm• Digital display of speed with presetting facility• Shaking amplitude 40mm• Universal platform to accommodate interchangeable• Clamp of assorted sizes for different capacity of flask• Automatic restart at preset speed in case of power failure• Minimum One year warranty	1
2	<u>Reciprocating Shaker</u> <ul style="list-style-type: none">• Carrier 36x18x4 inch• Shaking capacity: 100 to 1000ml• Speed range (Oscillation/minute) : 80 to 280 opm• Power supply : 220-230 V-AC, 50/60 Hz• Minimum One year warranty	1
3	<u>Single Water Distillation system</u> <ul style="list-style-type: none">• All glass type built in heater with DAPS horizontal type and water condenser• Discharge rate 4 litre/hour• Electrical requirement: 230 to 250V Single Phase 3.5 KW Quartz heater• Cooling water consumption: 60 litre/hr• Biological activities - Pyrogen free• pH 6-7• Conductivity (S/cm) : 3×10^{-6} S/cm• Distillate temperature 65 to 75°C• Auto cut off system with DAPS system• Minimum One year warranty	1
4	<u>Refrigerated Centrifuge</u> <ul style="list-style-type: none">• RPM: $\geq 24,000$ RPM• Capacity : 1 lt x 4 tubes to minimum of 1.5 mlx 12 tubes• Display: LCD display of temperature, RPM, time and rotor used• Operating mode: RPM or RCF and or weight• Variable run time: Timer setup for long run and also set time in hrs and mins, with alarm at completion• Temperature Range: -10°C to 40°C• Multipurpose rotors: Centrifugation rotors for different volume tubes<ul style="list-style-type: none">○ 1.5/2.0 ml,○ 15 ml,○ 50 ml,○ Suitable tubes required for the rotors (200Nos. each set)• System with auto lock facility, with safety for over speed/imbalance/temperature Limit/door detector• Automatic functioning of speed and timing• Two years warranty• UPS	1

5	<p><u>Microcontroller based pH meter With 3 point calibration</u></p> <p>pH : Range : 0 to 14 pH Resolution : 0.01pH Stability : 0.01pH per hour Relative Accuracy : ±0.02pH ±1Digit Slope : 85% to 115% Standard Buffers : 7 .000, 4 .000, 9.183 pH Buffer Deviation : ±0.5pH</p> <p>mV Range :0 to ±1999.9mV Resolution : 0.1mV Accuracy : ±0.5 mV ±1 Digit or ±0.05% of reading</p> <p>Temperature Compensation : Auto/Manual Range : 0 to 99.9°C Resolution : 0.1°C Accuracy : ±0.5°C ±1 Digit Display : 7 segment 7 digit led Minimum One year warranty</p>	1
6	<p><u>Conductivity meter</u></p> <p>Frequency : 100 Hz or 1 KHz Automatic</p> <p>Conductivity Range : 0.1 uS to 100mS. (6 decadic ranges) Accuracy : ±1% of F.S. ±1Digit Resolution : 0.001µs</p> <p>Temperature Range : 0°C to 100°C (Auto/Manual) Resolution : 0.1°C Accuracy : ±0.2°C ±1 Digit</p> <p>Cell Constant : Acceptable from 0.1 to 5.0 Auto Temp. Compensation: 0°C to 100°C with PT 100 sensor Manual Temp. Compensation: 0°C to 60°C user selectable Conductivity Temp. Co-efficient: 0.0% to 9.9% user selectable Display : 7 digits, 7 segment LEDs (3 digits for TEMP/TEMPCO 4 digits for Conductivity) with automatic decimal point selection</p> <p>Printer Port : Epson compatible 80 Column Dot Matrix Power : 230V AC ±10%, 50 Hz Dimension : 250(W) x 205(D) x 75(H) mm Weight : 1.25 Kg (Approx.) Accessories : i) Conductivity cell, cell constant 0.1 ii) Conductivity cell, cell constant 1.0 iii) Temperature probe (PT-100 sensor) iv) Stand & Clamp Minimum One year warranty</p>	1
7	<p><u>Foss Tecator Cyclotec Sample Mill</u></p> <ul style="list-style-type: none"> • Grinds samples with up to 10% moisture and oil content • Maximum throughput: 4g/second, 40 samples/hour • Maximum sample size: 10mm • Hopper capacity: 100mL • Motor: 0.5hp • Maximum speed: 20,000rpm • High-volume airflow enables self-cleaning and minimizes heat increase, thermal degradation and cross-contamination • Minimum One year warranty • Capacity (English) 3.38 oz. • Capacity 3.38 oz., 100mL • Depth (Metric) 29.97cm • Height (English) 15.8 in. 	1

	<ul style="list-style-type: none"> • Horsepower 0.5 • Load Capacity (Metric) Centralized 4g/sec, 40 samples/hr • Size (English) 0.39 in. • Speed 20000rpm • Watts 570w • Width (Metric) 20.32cm • Voltage 220V • Capacity (Metric) 100mL • Depth (English) 11.8 in. • Electrical Requirements 110V 60Hz • Height (Metric) 40.13cm • Includes Two 125mL sample bottles with snap on caps, 0.5 and 1mm screens, allen keys and grinding ring and seal for grinding chamber 	
	<ul style="list-style-type: none"> • Sample Type 10% moisture, oil content • Size (Metric) 1cm • Volume (Metric) 100mL • Width (English) 8 in. • Hertz 60Hz 	
8	<u>Sieves for Soil sample analysis</u> <ul style="list-style-type: none"> • Mesh size : 0.2mm to 2mm 	
9.	<u>Trinocular Research Microscope, with HDMI camera and software</u> <ul style="list-style-type: none"> • Mechanical Stage: Rackless X axis, double plate stage size 200x160mm, X/Y travel range 78mmx54mm. Low drive right hand movement controls. Hard coated surface for scratch resistance. Double specimen holder. • Condenser: Sub stage abbe condenser NA 1.25 with aspheric lens. Iris diaphragm with blue day light filter. Rack and pinion movements on stainless steel guides. • Focusing: Coaxial coarse and fine focusing on ball drive system for smooth Operation • Illumination: LED illumination with rechargeable battery cells provides 5-6 hours battery backup in case of electricity failure. 	1

The envelopes containing the quotation should bear the superscription "*Short Tender for the supply of Laboratory instruments*" and should be addressed to **The Professor & Head, Coconut Research Station, Kattachalkuzhi.P.O, Balaramapuram, Pin: 695 501.** Intending dealers may submit the quotations on their own papers with 1% of the quoted amount as EMD by way of DD/FD receipt/Bank guarantee issued by Nationalized Banks drawn in the name of 'Professor & Head, Coconut Research Station, Balaramapuram' payable at SBI, Balaramapuram. The tenders will be received up to **3:00 p.m. on 22/03/2018.** Late tenders will not be accepted. The tenders will be opened at 4:00 p.m. on the same day in the presence of the tenderers or their authorized representatives who may be present at that time. The maximum period required for delivery of the items, warranty of the items etc. should also be mentioned. All the items should be supplied and installed at this station. Details of the requirements and the conditions governing their supply can be obtained from the office of the undersigned during office hours.


Professor & Head

To: 1. The firms
2. KAU Webmail

Note: - Purchase will be effected depending on the availability of funds.