DEPARTMENT OF TECHNICAL EDUCATION
GOVERNMENT ENGINEERING COLLEGE, THRISSUR

No.D1/5375 /2018 Dated : 22/11/18

SHORT TENDER EXTENSION NOTICE

Sealed Tenders are invited for the supply of Equipments/Consumables for Govt.Enginering college, Thrissur.

Sl.No.	Tender No.	Name of lab	Items & Specification	Last date of issue	Last date of reciept	Date of opening	Tender value	App.Cost
1	D1/61/18-19	Electrical Engineering	Over Current Relay Testing System	28/12/18 12 Noon	28/12/18 2 PM	29/12/18 11 AM	672/- + Postal Charges	2,05,000/-
2	D1/62/18-19	Mechanical Engineering	Lab Equipments	28/12/18 12 Noon	28/12/18 2 PM	29/12/18 11 AM	1400/- + Postal Charges	4,86,350/-

Total AS = Rs.6,91,350 /-

Phone No.0487-2334144

Website. www.gectcr.ac.in

Intending tenderers may obtain the requisite tender form from Principal, Govt.Engineerig College, Thrissur on cash remittance of cost of Tender form + postal charge.Tender forms are not transferable. Late Tenders will not be accepted. Application for the tender form should be accompanied by cash remittance, as per the price fixed for the tender form.

Cheques, Postages stamps etc will not be accepted towards the cost of the forms nor the forms will be sent by VPP.

Tenders should be accompanied by EMD of 1% of the amount by DD drawn in favour of the Principal, Govt.Engineering College, Thrissur (EMD Minimum Rs.1500/-) with an agreement in Kerala Stamp Paper worth Rs.200/-. Details can be had from the Govt.Engineering College Office working hours.

PRINCIPAL

D1/5375/18

T.NO.D1/61/18-19

Due date : 8/11/18 2pm
28/12

Open date : 9/11/18 11Am
29/12

proposal for Supply, installation and testing of Overcu voltage and over voltage relay testing System

Sl No	Item	Specification	qty
1	**Over Current Relay Testing System**	a)Single Phase Variac b)Over Current Relay i)Type : Inverse Time ii)Normal Voltage : 100 V AC, 50 Hz iii) Current setting : 0.5,0.75,1,1.25,1.50,1.75 , 2Amps c) Measurement i)Voltmeter : 25-300 V ii)Ammeter : 200 mA - 5 Amp	1
2	**Under voltage and Over voltage Relay testing system**	Experiment panel that contains :- a)Single Phase Variac input : 230 V output : 0-270 V current : 0-5 A b)Over voltage Relay Normal Voltage : 100 V AC, 50 Hz	1

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Sl No.	Name of Equipment	Specification
1	Determination of heat transfer coefficients in free convection (Natural Convection)	**RANGE OF EXPERIMENTS TO BE CARRIED OUT :** 1. To study the temperature distribution along the length of a vertical pipe In natural convection. **EXPERIMENTAL SETUP :** 1. Heater Assembly. 2. Brass Vertical cylinder 3. Cylinder enclosure with stand. 4. Cylinder holding assembly. 5. Set of thermocouples. **CONTROL PANEL :** 1. 6 Channel Digital Temperature Indicator 2. Dimmerstat : 0 - 2 A. 3. Main's On/Off Switch. 4. Voltmeter :0 - 250 V. digital 5. Ammeter :0 - 3 A. digital
2	Determination of heat transfer coefficients in forced convection	**RANGE OF EXPERIMENTS TO BE CARRIED OUT :** 1. Average surface heat transfer coefficient for a pipe losing heat by forced convection to air flowing through it can be obtained for different air flow & heat flow rates. **EXPERIMENTAL SETUP :** 1. Band Heater Assembly. 2. Forced convection pipe assembly. 3. Blower Unit with orifice & manometer arrangement for measurement. 4. Set of thermocouples. **CONTROL PANEL :** 1. 12 Channel Digital Temperature Indicator 2. Dimmerstat : 0 - 2 A. 3. Main's On/Off Switch. 4. Voltmeter :0 - 250 V .digital 5. Ammeter :0 - 3 A. digital 6. Blower On/Off Switch
3	Determination of thermal conductivity of solids(composite wall)	Slab : 200mm dia, 14mm thick Slab material : MS, Press wood & Asbestos Heater : Disc Heater 200 mm dia. 250watts Voltmeter : digital voltmeter of range 0- 300 VAC Ammeter : digital ammeter of range 0-20AAC Temperature indicator : digital temperature indicator of range 0-1200°c (6 channel) Thermocouples : (k-type) Sensors -6 nos. Variac : Auto transformer 2A. Outer Box Size : 275mm x 275 mm x 185mm Switch : 15 amps Fuse : 5 amps
4	Determination of thermal conductivity of powder (Insulating Powder)	Inner sphere : 100mm dia, copper Outer sphere : 200mm dia, copper Heater : Round type, Mica heater100mm dia,250w Digital Voltmeter : 0-300V Digital Ammeter : 0-20A Digital Temp Indicator: 0-1200°c (12 channel) with selector switch Thermocouples : (K-type)-sensors 12 nos. Insulating powder : MGO powder Switch : 15 amps Fuse : 5 amps

1 NO

1 NO

1 NO

1 NO

Tender - D1/62/18-19. File. No. D1/5779/18.
28/12

Due date : 8/1/18 - 2pm

Open date : 9/1/18 - 11 Am.
29/12

Tender value - Rs. 672/-

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			Qty
5	Determination of Thermal conductivity of liquids	**RANGE OF EXPERIMENTS TO BE CARRIED OUT :** 1. To determine the thermal conductivity. **EXPERIMENTAL SETUP :** 1. Ring Guard Heater Assembly. 2. Test specimen assembly. 3. Cooling Chamber with liquid Circulation 4. Central Heater assembly 5. Set of thermocouples. **~~CONTROL PANEL~~ :** 1. 12 Channel Digital Temperature Indicator 2. Dimmerstat : 0 - 2 A. 3. Main's On/Off Switch. 4. Voltmeter :0 - 250 V. digital 5. Ammeter :0 - 3 A. digital	1 NO
6	Determination of emissivity of a specimen (emissivity apparatus)	**~~RANGE OF EXPERIMENTS TO BE CARRIED OUT~~** 1. To determine emissivity of test plate. **EXPERIMENTAL SETUP :** 1. Heater for black & test plate. 2. Test Plate : Polished Aluminum. 3. Reference Plate : Black Aluminum 4. Set of thermocouples. **CONTROL PANEL :** 1. 12 ~~Channel Digital~~ Temperature ~~Indicator~~ 2. Dimmerstat : 0 - 2 A., 2 Nos. 3. Main's On/Off Switch. 4. Voltmeter :0 - 250 V. digital 5. Ammeter :0 - 3 A. digital	1 NO
7	Determination of Stefan Boltzman constant (Stefan Boltzmann apparatus)	**RANGE OF EXPERIMENTS TO BE CARRIED OUT :** 1. To determine the Radiation Stefan Boltzman Constant. **~~EXPERIMENTAL SETUP~~ :** 1. Hot water tank with instan heater. 2. Copper semi sphere with copper vessel. 3. Copper Test Piece. 4. Insulated support plate. 5. Set of thermocouples. **CONTROL PANEL :** 1. 12 Channel Digital Temperature Indicator with bush button 2. ~~Main's On/Off Switch.~~ 3. Voltmeter :0 - 250 V. digital 4. Ammeter :0 - 15 A. digital	1 NO
8	Study and performance test on refrigeration (Refrigeration Test rig)	**RANGE OF EXPERIMENTS TO BE CARRIED OUT** 1. To Determine the cop of given plant **CONTROL PANEL :** 1. Compressor 2. Capacity : less than one ton 3. Temp indicator 12 channel digital 4. Condenser 5. Dryer 6. Capillary tube & expansion value 7. Sensor 8. Frezer box 9. ~~Solenoid switch~~ 10. Pressure gauge & vacuum gauge	1 NO
9	Performance study on heat pipe(Heat pipe apparatus)	1. O.D. of heat pipe-30 mm. Dia. nominal stainless steel pipe. 2. Stainless steel pipe-30 mm. dia. nominal. 3. Copper pipe-30 mm. dia. nominal. 4. Length of the pipes-350 mm. each approx. 5. Condenser tank-Approx. 2 Lit. Capacity. 6. Working fluid in heat pipe-distilled water. 7. Dimmerstat 0-2 A, 0-250 V. 8. Voltmeter-240 volts. 9. Ammeter-0-3 A. 10. Temperature indicator 0-2000 c multi channels	1 NO.

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10	Calibration of Thermocouples apparatus	1. Thermocouple (J Type) as a Temperature sensor. 2. Cold junction compensation sensor mounted on front panel. 3. Signal conditioner for compensation sensor and thermocouple sensor [(0-5V) DC] 4. Zero potmeter provided. 5. Regulated Power Supply. 6. Water bath as a heat source. (supply : 230V AC, Power : 1000 Watts) 7. Digital display to indicate the water bath temperature in °C. 8. Analog thermometer is provided. Powder coated metal cabinet

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