



संत लौगोवाल अभियांत्रिकी एवं प्रौद्योगिकी संस्थान,  
लौगोवाल, संगरूर, पंजाब - १४८ १०६

(मानव संसाधन मंत्रालय के अधीन समविश्वविद्यालय)

**Sant Longowal Institute of Engineering and Technology**

**Longowal, Dist. Sangrur, Punjab - 148106**

(Deemed to be University under MHRD)

Ref. No. SLIET/PUR/65/19/ 1536 - 1541

Date: 17/02/2020

(Registered Post)

M/s \_\_\_\_\_

Incharge - website

**Sub: Notice inviting quotation for purchase of equipment to FET dept.**

This Institute intends to purchase equipment for Food Engineering Dept. Please send quotation to the undersigned in a sealed cover duly super scribed on envelop "**Quotation for purchase of equipments**" so as to reach latest by closing date i.e. 09.03.2020. The specifications are as under:

S. No.	Detailed Specification	Qty.	EMD (Rs.)	Remarks
1)	Heat transfer in forced convection	01	1100.00	Detailed proof of specifications in the shape of leaflets for Make & Model no. of item will be attached
2)	Heat transfer in natural convection	01	900.00	
3)	Heat transfer through composite walls	01	1000.00	
4)	Stefan Boltzmann Apparatus	01	900.00	
5)	Thermal conductivity of liquid	01	1500.00	
6)	Unsteady state of heat transfer apparatus	01	1400.00	
7)	Dropwise film wise condensation apparatus	01	1600.00	
8)	Plate type heat exchanger	01	2500.00	
9)	Raynold's apparatus	01	800.00	
10)	Bernoulli's theorem apparatus	01	1250.00	
11)	Parallel flow/counter flow heat exchanger	01	1100.00	
12)	Critical heat flux apparatus	01	1300.00	
13)	Pipe friction apparatus	01	1200.00	
14)	Losses in pipes	01	1200.00	
15)	Gerber centrifuge	01	1900.00	
	(Detailed technical specifications of all items are enclosed at Annexure-A)			

**The Terms & Conditions for submitting quotation are as under:-**

- 1) It may be noted that quotation received only through registered/speed post shall be considered. The institute is located in a remote area and it takes 5 to 7 days to reach the mail, therefore, quotation be dispatched well in time to avoid any sort of delay.
- 2) Rate of GST/IGST, if extra must be mentioned clearly along with GST number.
- 3) The other terms & conditions for submitting the quotation are given overleaf which must be read carefully before submitting the quotation.
- 4) The Price quoted must be FOR SLIET, Longowal.
- 5) Quotation must be valid for a period of 3 months.
- 6) Quotations received later than due date are liable to be rejected and returned as it is.

- 7) Quotation must be sent on the letter head of the party duly addressed to Deputy Registrar (Store & Purchase) along with a certificate that the firm/company is not blacklisted by any govt. organization/dept.
- 8) As per instructions if purpose of quotation is not super scribed and quotation is opened by mistake then it may be rejected.
- 9) EMD is required to be submitted in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks in favour of Director, SLIET, Longowal.

*Swish* 17/2/2020  
Deputy Registrar  
(Store & Purchase)

## TERMS & CONDITIONS FOR QUOTATION

<b>DELIVERY</b>	The rate quoted must be free delivery/F.O.R. Longowal after allowing the discount, if any. Where quoted extra ad-valorem rate payable should clearly be indicated. Supply should be made within the specified delivery period.
<b>TERMS OF PAYMENT</b>	Our normal term of payment is within 45 days after receipt of stores in good condition by means of cheque/draft/RTGS.
<b>PERFORMANCE SECURITY</b>	Performance Security @ 5% of order value in the shape of DD, FDR or BG valid for a period of sixty days beyond the date of completion of all contractual obligations of the supplier including warranty obligations, as per GFR-2017 rules, is also required.
<b>Concessional GST</b>	The Institute is registered with the department of Scientific & Industrial Research (DSIR) for purposes of availing customs duty exemption in terms of Govt. notification No. 51/96-customs dated 23.07.1996 and central excise duty exemption in terms of Govt. notification No. 10/97-central excise dated 01.03.1997 and 45/2017 & 47/2017 dated 14/11/2017 regarding GST as amended from time to time. The relevant exemption certificate will be issued to the successful bidder only if the excise duty/customs duty/GST are exclusively mentioned in the commercial bid of e-Tender/NIQ. <b>NO ADVANCE PAYMENT WILL BE MADE.</b>
<b>EXEMPTIONS</b>	Excise and customs duties are exempted to the institute. The relevant exemption certificate will be issued to the successful bidder only if the excise duty/custom duty is exclusively mentioned in the Quotation. In case the offered items are to be imported, the rates should be quoted in foreign currency on FOB basis. Basic duty as applicable under notification No. 51/96 customs dated 23.07.1996 as applicable shall be borne by the institute. If the price quoted is in foreign currency then payment shall be made through letter of credit against submission of B.G. of Min. 25% value of supply order, if the order value is more than US\$ 10,000 or through Telegraphic Transfer (TT) if the order value is less than US\$ 10,000 through Nationalized banks. The bank charges outside India should be borne by the Beneficiary. Clearance at customs will be arranged by us but you will assist our clearance agent. In case of indigenous item the price must be quoted in Indian Rupees and 100% payment will be made only after successful installation, testing and commissioning of equipment.
<b>DIRECTOR'S RIGHTS</b>	Director, SLIET, reserves the rights of acceptance or rejection of any or all quotations. The discretion for increasing or decreasing of the quantities also rests with him. SLIET also does not bind itself to accept the lowest price. In case of any dispute, the decision of Director SLIET will be final & binding.
<b>VALIDITY OF QUOTATIONS</b>	Quotations must remain valid for period of at least 03 months.
<b>SAMPLE/BRAND/MAKE/WEIGHT</b>	Sample, where asked for, will invariably be made available and sent along with the quotations. However, Brand/Make/Weight etc. must be mentioned clearly in the quotations. Technical literature/pamphlet should also be enclosed.
<b>REJECTION</b>	Quotation not confirming to the set procedure as above will be rejected. Conditional, telegraphic quotation shall be rejected out rightly.
<b>DISCOUNT/REBATES</b>	A special discount/rebate wherever admissible keeping in view that the supply is being made for education purpose in respect of Public Institution of national importance may please be indicated.
<b>GENERAL TERMS</b>	SLIET shall not be held responsible for any postal delay in sending or late receipt of quotation. Quotation should be free from corrections & erasures.  <b>Other terms &amp; Conditions will be applicable as per GFR-2017.</b>

  
 Deputy Registrar  
 (Store & Purchase)

## Annexure - A

S. No.	Description of equipment	Qty
1)	<b>Heat transfer in forced convection</b> Diameter of test specification (G.I.) pipe: 36 mm approx. Length of the test section: 400 mm approx. Orifice meter (14 mm) with U tube water manometer No. of thermocouples pipe surface: 6 Nos. No. of thermocouples for air temperature: 2 Nos. Nichrome heater mounted on pipe surface. Blower 0.5 Hp with motor. Digital temperature indicator (0-300°C) Dimmerstat Voltmeter-0 - 300 V Ammeter-0 - 5 A 230v, 5A, AC, electric supply with earthing connection.	01
2)	<b>Heat Transfer in Natural Convection</b> Enclosure size: 200 mmX 200 mm x 700 mm approx. Diameter of cylinder: 38 mm approx. Length of cylinder: 500 mm approx. Heater : Nichrome type Thermocouple: 7 nos. approx. Voltmeter-0 - 300 V Ammeter-0 - 5 A Dimmerstat- 1000 watt 230v, 5A, AC, electric supply with earthing connection.	01
3)	<b>Heat Transfer through Composite Walls</b> Slab Material: Cast Iron: 250 mm dia. & 20mm thick. Bakelite: 250 mm dia. & 15 mm thick. Press Wood: 250 mm dia. & 12 mm thick. Mild steel: 250 mm dia. & 15 mm thick Heater: Nichrome Wire Heater. Dimmerstat Control Panel: Digital Voltmeter: 0-300 Volts. Digital Ammeter: 0-2 Amp. Digital Temp. Indicator: 0-2000C, with multi-channel switch Temp Sensors: RTD PT-100 type. 230v, 5A, AC, electric supply with earthing connection.	01
4)	<b>Stefan Boltzmann Apparatus</b> Hemisphere Diameter: 20 cm approx. Diameter of outer jacket: 25 cm approx. Base Bakelite plate: 32 cm approx. Thickness of test Disc: 1.5 mm approx. Diameter of test Disc: 2 cm approx. No. of thermocouple on hemisphere: 4 approx. No. of thermocouple on test disc: 1 approx. Water tank with eight litre capacity with immersion heater with thermocouple. Temperature indicator : 0-300°C	01
5)	<b>Thermal conductivity of liquid</b> Hot Plate Assembly & Cold Plate Assembly. Ring Guard Heater Assembly. Top Guard Heater Assembly. Coolant Water Circulation System. Thermocouples on Hot Plate, Cold Plate & Guard Heaters. Insulation Bags. Enclosure box with levelling screws. Power supply arrangement for Hot Plate & Guard Heater. Dimmers for Hot plate & Guard Heater power control of 2 amp. Capacity each. Voltmeter & Ammeter for Power Measurement. Multi-Channel Temperature Indicator 0- 100oC with high accuracy.	01
6)	<b>Unsteady state of heat transfer apparatus</b> Copper test cylinder, with a thermocouple at the centre; Hot Water bath with electric heater; Thermostat: Digital temperature indicator; a timer with buzzer.	01

7)	<b>Dropwise film wise condensation apparatus</b> Steam Generator; Electrical Heater (2 KW); Copper tube with two different surface finishes; Rotameter; Digital Temperature Indicator	01
8)	<b>Plate type heat exchanger</b> 10 10 No. of Plates; Material - Stainless steel: GR 316/SA 240; Height X Breadth: 480 X 180 mm. approx.; Suitable capacity Geyser; Temperature Indicator with Thermocouples- 4 Nos; Maximum working Temp. of water 700C. Circulation fluid will be water. M.S. frame stand with Powder coating.	01
9)	<b>Raynold's apparatus</b> S .S. Storage Tank with flow steadying arrangement tanks size 400mm x 400mm x 600mm. approx., Dye bottle and capillary tube; Bell Mouth Entry; Acrylic Tube of 25mm. O. D. & 90cm. Length approx; Suitable stand to mount the above tube; Valve for control the flow of water	01
10)	<b>Bernoulli's theorem apparatus</b> Tanks - 2 Number of Suitable Size (internally coated by Fibber-glass coating); M. S. tank with coating with fibre glass lining for water collection; 1/2 H. P. motor pump set; Flow Channel made up of transparent acrylic of 750 mm. Length Approx. Piezometer tube (9 nos) spaced at equal distance made up of transparent plastic or acrylic martial; M.S. stand for supporting to equipment.	01
11)	<b>Parallel flow/counter flow heat exchanger</b> Thermocouples with temperature indicator for measure Temp.4 No. Geyser - 1 no. 3 Kw. Measuring Flask - 1 no. Inner Pipe is Copper and Outer Pipe is G.I. With insulation	01
12)	<b>Critical heat flux apparatus</b> Cylindrical Glass Vessel diameter = 200 mm. approx. Cylindrical Glass vessel height = 100 mm. approx. Bulk Heater = Nichrome Coil. Thermometer = 0-100oC Test Heater -Nichrome Wire - calculated length as per type of swg. Dimmerstat. 10 Amp. – 1 no. Voltmeter. – 1 No. Ammeter. – 1 No.	01
13)	<b>Pipe friction Apparatus</b> Three G. I. pipes; ½ Inch., ¾ Inch. & 1 Inch. nominal diameter approx.; Length of the pipes 1 m approx.; ¼ Brass cock tapping at 1 m distance; Measuring tank (internally coated with Fiber-Glass coating) of suitable capacity with drain valve and gauge tube; differential manometer; 1/2 H. P. Motor pump set. Supporting M. S. stand structure for the equipment.	01
14)	<b>Losses in Pipes</b> M.S. Tank internally Fibre glass coated , recirculating type	01
15)	<b>Gerber Centrifuge</b> Control: Microprocessor control with digital reading, Automatic break, Timer: 0-60 min, Heating: 600 W adjustable up to 65 °C, Gerber rotor with 8 Butyrometer sleeves, Universal rotor with 8 Babcock sleeves, Voltage 115 / 230 VAC, 50 / 60 Hz, Cover lock, Warranty 1 year	01