IKG-PTU MOHALI CAMPUS - I
C-102/B Industrial Area,Phase 7 , Mohali (160059)
(A Constituent Institute of IKG- Punjab Technical University)

No. IKGPTU/MC-1/ 437 Dated: 15/3/21

M/S.....

.....

.....

Subject: - Quotation for Semiconductor Physics Lab Equipment/Setup at IKGPTU Mohali Campus-1.

Dear Sir/Madam

University intends to purchase equipment/setup for Semiconductor Lab at IKGPTU Mohali Campus-1 by inviting sealed quotations. The supply order will be placed to the firm offering lowest rates equipment/setup wise. Therefore, you are requested to send the sealed quotations of the equipment / setup by quoting lowest rates (inclusive of all taxes, govt levies duties etc.) through registered/speed post or by hand. Please subscribe on envelope "Quotation for setups for Semiconductor Lab at IKGPTU Mohali Campus-1" and to be opened by committee only. Quotation must be reach in the office of Incharge Mohali campus-1, C-102/B, Industrial Area Phase 7, S.A.S Nagar Mohali 160059 up to 3 PM on April 15, 2021. Quotation will be opened at IKGPTU Mohali Campus-1 or IKGPTU Main Campus at 4 PM on the same day. The vendors or their representative may be present at time of opening of quotations. If Government of Punjab/IKGPTU declares on April 15th, 2021 quotation will be open on next working day. Specification of items are attached as per Annxure-I.

Terms and Conditions:

1. Bidder is at liberty to quote rates one or more setup(s)/item(s)/make(s), etc.
2. The firm have GST number need only apply.
3. Any quotation other than the specification mentioned will not be considered.
4. Bidder should quote the inclusive of two-year comprehensive warranty.

5. University reserves the right to buy/not to buy/increase/decrease any of the setup(s) quantity.
6. The items are to be delivered at IKGPTU Mohali campus-1 C-102/B, Industrial Area Phase 7, S.A.S Nagar Mohali 160059 within 3 weeks of issuance of the supply order
7. No advance payment will be made.
8. University will not be paying anything extra as the quotation invited are inclusive of all taxes/Govt levied duties/transportation charges etc.
9. The payment will be released only after the receipt of satisfactory report from the IKGPTU Mohali campus-1 in the term of successful installation and demonstration of supplied equipment's from the vendor.

Assistant Registrar
IKGPTU Mohali Campus-1

Annexure-I

Following are the specification required for Semiconductor Physics Lab at Mohali Campus-1

S.No.	Name of setup	Technical Specifications	Qty
1.	Setup to study the characteristic of Ge-Si junction diode	Mains power : 230V, AC ±10% DC power supply : +12V Ammeter Range : 1μA to 200mA Voltmeter Range : 1mV to 200V Semiconductor diode- Ge-Si, with Display	2
2.	Setup to analyze the suitability of a given Zener diode as a power regulator	Mains Supply : 230V ±10%, 50Hz Transformer : 0 – 9V, 500mA (approximate) Filter : Capacitive 1000mF, 35V Zener Diode : V = 5.6V, I = 178mA Potentiometer, P1 : 4.7k ohms Potentiometer, P2 : 4.7k ohms	2
3.	Setup to find out the intensity response of a solar cell	Solar Panel : Consists of 6 solar cells Maximum Voltage of each solar cell: 1.5V Maximum Current of each solar cell: 150mA Voltmeter : 0-10V Ammeter : 0-500mA Potentiometer : 5K ohms 2 AA Rechargeable NiCd Battery :1.2V Bulb : 1.2V, 270mA Fan : 1.5V, 400mA	2
4.	Setup to find out the intensity response of a LED.	Power supply : 230V +/- 10%, 50 Hz Transmitter Wavelength (nm): 565 nm (For Green light) LED Rotation : 0 -360 degree with resolution of 1 degree Transmitter circuitry : LED Wavelength (nm) : 700 nm (For Red light) Wavelength (nm) : 430 nm (For Blue light) Receiver Wavelength (nm): 940 nm Receiver circuitry: Silicon phototransistor & Zero adjustment circuit	2
5.	Setup to determine the energy band gap of a Ge-semiconductor.	Mains : 230V ±10%, 50 Hz DC Power Supply +15V, 2.5A +5V, 0.5 A Diode: P-N junction Germanium Type Switch 1 Pole, 2 Ways Toggle Type DPM Type: LCD Display Oven Height : 77 mm Width : 74 mm Coil : Nichrome Wire	2

		Thermometer : Graduated scale up to 100°C Fuse : 0.5A	
6.	Setup to determine the energy band gap of a Si-semiconductor.	Mains : 230V ±10%, 50 Hz DC Power Supply +15V, 2.5A +5V, 0.5 A Diode: P-N junction Germanium Type Switch 1 Pole, 2 Ways Toggle Type DPM Type: LCD Display Oven Height : 77 mm Width : 74 mm Coil : Nichrome Wire Thermometer : Graduated scale up to 100°C Fuse : 0.5A	2
7.	Setup to determine the resistivity of a semiconductor by four probe method.	Four Probes Contacts: Spring loaded Space between Probes : 2 mm ±2% Probes : Collinear Sample Material : Germanium Crystal Type : P type Oven: Maximum Temperature: 200°C Heater Resistance : 37V Heater Voltage : 45 V (approx.) Measurement Unit LCD Display Range: 0-2 V Constant Current Generator: Current Range: 0 to 20 mA Resolution : 1 mA Open Circuit Voltage: 18 V Oven Power Supply Input: 230 V AC ±10%, 50 Hz	2
8.	Setup to study voltage regulation and ripple factor for a half-wave and a full-wave rectifier without and with different filters.	Mains Supply : 230V ±10%, 50Hz Transformer Rating : 9V center tapped (300mA) Half wave Rectifier output : +4V DC approximate Center-Trapped Rectifier : +8V DC approximate Bridge Rectifier Output : +8V DC approximate Filter : LC Type Load : Resistive 220W, 0.5W	2