



Government of West Bengal
Office of the Principal
GOVERNMENT GENERAL DEGREE COLLEGE AT KALNA -I
Vill-- Muragacha , Post—Medhgachi, Dist—Purba Bardhaman, Pin-713405
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TENDER INVITING NOTICE

Memo No: GGDCK/TEN/PHY/81/19

Date: 03.12.2019

Sealed tenders are invited for the college from the interested parties/suppliers/vendors for the following items as per specification mentioned below. All rates should be inclusive of **ALL TAXES** and any other charges. Prices should be net and no carrying cost will be applicable in any case. **The unit price of each item and corresponding ALL TAXES and the final price inclusive of ALL TAXES (GST) should invariably be mentioned.**

The last date of submission of tenders is **18.12.2019** up to **4.00 pm** at the office of the principal and the date of opening of tenders in presence of the willing parties/suppliers/vendors is **19.12.2019** at **2.00 pm**.

Note: Materials should be delivered and installed if necessitated at the ultimate destination by parties/suppliers/vendors. No extra charges of carriage and installation will be borne by the college. The bidders should have valid registration with the authorities of the Sales Tax or Work contract tax or GST or any other tax as admissible. The undersigned reserves the right to reject any or all items if found defective or not according to the specification mentioned.

List of items required (Department of Physics)

Semester-III

CC- VI : THERMAL PHYSICS

1. To determine Stefan's constant (Complete set).
2. To determine the Coefficient of Thermal Conductivity of Cu by Searle's Apparatus (Complete set).
3. To calibrate a thermocouple to measure temperature in a specified Range using (i) Null Method,(ii) Direct measurement using Op-Amp difference amplifier and to determine Neutral Temperature (Complete set).

CC- VII : DIGITAL SYSTEMS AND APPLICATIONS

IC's : Full Adder(7483) , Flip-Flop(JK and SR).

Semester-IV

CC - IX : ELEMENTS OF MODERN PHYSICS

1. Hydrogen tube for H-alpha emission line.
2. Iodine vapour lamp absorption lines in the rotational spectrum.

3. Photo-electric effect: photo current versus intensity and wavelength of light; maximum energy of photo-electrons versus frequency (Complete set).
4. To determine work function of material of filament of directly heated vacuum diode (Complete set).
5. Apparatus for determination the Millikan oil drop apparatus and determine the charge of an electron.

CC - X: ANALOG SYSTEMS AND APPLICATIONS

1. Study of V-I & power curves of solar cells, and find maximum power point & efficiency (Complete set).

Semester-V

CC - XI : QUANTUM MECHANICS AND APPLICATIONS

1. Study of Electron spin resonance- determine magnetic field as a function of the resonance frequency (Complete set).
2. Study of Zeeman Effect: with external magnetic field (Complete set).
3. To show the tunnelling effect in tunnel diode using I-V characteristics (Complete set).

CC- XII : SOLID STATE PHYSICS

1. To measure the Dielectric Constant of a dielectric Materials with frequency (Complete set).
2. To measure the resistivity of a semiconductor (Ge) with temperature by four-probe method (room temperature to 150°C) and to determine its band gap (Complete set).
3. To determine the Hall coefficient of a semiconductor sample (Complete set).

Semester-VI

CC - XIII : ELECTROMAGNETIC THEORY

1. To analyze elliptically polarized Light by using a Babinet's compensator (Complete set).
2. To determine the wavelength and velocity of ultrasonic waves in a liquid (Kerosene Oil, Xylene, etc.) by studying the diffraction through ultrasonic grating (Complete set).

Other apparatus needed:

1. Magnifying glass
2. Helium discharge tube set - Omsons make.
3. 555 Timer
4. Carbon resistance t (10 ohm to 820 Kohm)
5. Extension cord
6. Soldering Iron, past, wire
7. Wire cutter
8. Plus
9. Table Lamp
10. Casio Scientific calculator fx 100MS.
11. Function Generator (Make SES)
12. A.C. Electronics milivoltmeter (Make SES)

HOD, Department of Physics

Sd/-
Officer-in-Charge
Government General Degree College at Kalna-1