PRABHAT KUMAR COLLEGE, CONTAI

M. Sc. 3rd Semester Examination-2021

Subject: Physics   Paper: PHS 395   Full Marks 50 Time: 2 hr

ADVANCE PRACTICAL –II

Answer any TWO of the following questions

1) Explain with reason how resistivity of a semiconductor varies with temperature. Write down in detail the working formula and procedure for the determination of band-gap in a semiconductor.
[12+ 2+11]

2) What is Planck's constant? Write down the procedure for the determination of Planck's constant using the photo electric effect.   [3+22]

3) What is Hall Effect? Write down the working formula and procedure for the measurement of Hall co-efficient of a given sample.   [3+2+20]

4) Explain elaborately Frank-Hertz experiment and discuss its significance.   [20+5]

5) What is the principle of GM counter? Explain in detail how to determine the resolving time of The GM counting system.   [5+20]

6) What is the principle of Michelson Interferometer? Write down the procedure to determine the refractive index using Michelson Interferometer. What are the applications of Michelson Interferometer?   [5+17+3]