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

- 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]