

M.Sc. DEGREE EXAMINATION, EVEN SEMESTER 2021
II Year IV Semester
Condensed Matter Physics

Max.marks :25

Answer any **FIVE** questions ($5 \times 5 = 25$) Marks

1. What are the properties of reciprocal lattice?
2. Define phase velocity of a wave. Given that the term $\cos\theta = 2.5$. Find the phase velocity.
3. How does thermal conductivity change with temperature? What is the value of Lorentz number?
4. Narrate the basic steps involved in the adiabatic demagnetization process.
5. Demonstrate how London equation leads to Meissner effect.
6. How do you calculate the atomic scattering factor?
7. What is the principle of Hall effect? Which type of material has been used to explain the Hall effect? What is Brillouin zone?