Physics Department — Subject - Solid State Physics

B.Sc. (IV^th) sem — Name of Asst. - Mrs. Sapana Kumari

MONTH - JULY [TOPICS COVERED]

Crystal Structure - I:

- Crystalline and Glassy forms
- Liquid Crystals.
- Crystal Structure & periodicity.

MONTH - AUGUST

- Lattice and basis crystal Translational vectors and axes
- Unit cell and primitive cell, Wigner Seitz primitive cell
- Symmetry operation for a two dimensional crystal
- Bravais lattice in two dimension & three dimens
- Test 1st and Problem solving.

MONTH - September

- Crystal planes and Miller indices, interplanner spacing
- Crystal structure of zinc sulphide, NaCl & diamond.
- X-ray diffraction, Bragg's law
- Experimental x-ray diffraction methods, K-space
- Test 2nd & Group discussion.

MONTH - October

- Reciprocal lattice and its Physical significance.
- Reciprocal lattice vectors.
- Reciprocal lattice to a simple cubic, b.c.c. & f.c.c.
- Specific heat: Specific heat of solids.
- Problem solving

MONTH - NOVEMBER

- Einstein's theory of specific heat.
- Debye model of specific heat of solids.
- Test 3rd and discussion.

Sapana 1/11/18