



SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore – 641 107

AN AUTONOMOUS INSTITUTION



Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai.

UNIT -IV CRYSTAL PHYSICS

TOPIC – X QUESTION BANK

- Explain the terms : atomic radius, Co-ordination number and packing factor.
 - Show that the packing factor for Face centered Cubic and Hexagonal Close packed Structures are equal. (JAN. 2010)
- What are Miller indices? Explain.
 - Derive an expression for the interplanar spacing for (hkl) planes of a cubic structure. (JAN. 2010)
- What is packing factor? Obtain packing factor for SC, BCC and FCC lattices
 - Describe the crystal structure of diamond. (JAN 2011)
- Calculate atomic radius and packing factor for diamond structure. Explain what type of bond is present in diamond. (JAN 2012)
- What are bravais lattice?
 - What is primitive cell?
 - Derive an expression for the interplanar spacing for (hkl) planes of a cubic structure. (DEC. 2008)
- Define atomic radius and Packing Factor.
 - Describe a HCP structure. Show that for an HCP structure $c/a = \sqrt{8/3}$ and hence calculate the packing fraction for the HCP structure. (DEC. 2008)
- Explain the Bridgman and Czocharlski techniques for growing crystal. (JAN 2014)
- Describe CVD and PVD crystal growth techniques.
- Write a note on types of crystal system.