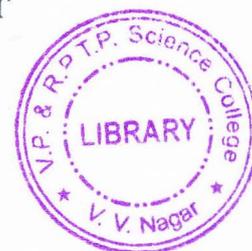


VP & RPTP Science College-Vallabh Vidyanagar

Internal Test: 2015

S Y BSc [Semester-IV]

Subject-Physics US04CPHY02



Date: 14/03/2015 Saturday

Time: 10.30 am to 12.00 pm

Total Marks-25

- Q-1** Multiple Choice Questions: [Attempt all] 3
- (i) The number of atoms present in unit cell of BCC structure is
- (a) 1 (b) 2
(c) 4 (d) 6
- (ii) The solid sodium is vaporized by supplying energy equal to _____ energy.
- (a) Ionization (b) Dissociation
(c) Sublimation (d) Lattice
- (iii) If one of the hydrogen atom in polyethylene are replaced by CH_3 , the resulting polymer is called
- (a) Polyvinyl chloride (b) Polypropylene
(c) Polytetrafluoroethylene (d) Polycarbonate
- Q-2** Answer the following questions in short [Attempt any two]. 4
- (a) Draw (100) and (110) planes for cubic system.
(b) Give common features of materials having metallic bond.
(c) Define molecular weight for polymers.
- Q-3** Discuss seven crystal systems based on lattice parameters, in detail. 6
- OR**
- Q-3** Define atomic packing factor (APF). Calculate APF for FCC structure. 6
- Q-4** Calculate the lattice energy of ionic crystals. 6
- OR**
- Q-4** Derive the Madelung constant of ionic crystals. 6
- Q-5** Give classification of polymers based on molecular characteristics. 6
- OR**
- Q-5** Discuss isomerism in detail. 6