

**V. P. & R. P. T. P. Science College**

**Vallabh Vidyanagar - 388 120**

**First Internal Test S. Y. B. Sc. (Sem-4) PHYSICS (US04CPHY02)**

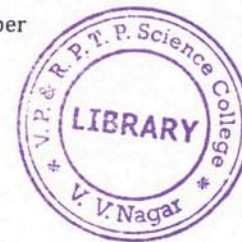
**Wednesday: 14-03-2018**

**Time: 3.00pm to 4.30 pm**

**Q-1 Multiple Choice Question**

**03**

- I. The unit cell having only one lattice point is known as
- (a) Primitive cell (c) Non-primitive cell  
(b) APF (d) Coordination number
- II. Which is secondary bond
- (a) ionic (c) metallic  
(b) hydrogen (d) covalent
- III. \_\_\_\_\_ is a natural polymer
- (a) wood (c) Polyester  
(b) Plastic (d) PVC



**Q-2 Short question (attempt any two)**

**04**

- 1 What is Primitive Cell?
- 2 What is cohesive energy?
- 3 What is isomerism?

**Q-3 Discuss in detail how to construct primitive or Wigner-Seitz cell**

**06**

**Or**

**Q-3 Explain seven crystal system with proper diagram**

**06**

**Q-4 Calculate the lattice energy of ionic crystal**

**06**

**Or**

**Q-4 Derive Madelung constant of ionic crystal**

**06**

**Q-5 Discuss molecular structure in detail**

**06**

**Or**

**Q-5 - What is difference between thermoplastic and thermosetting polymers**

**06**