

SYNOPSIS

- Solids are classified into two types- Crystalline and Amorphous solids.
- The crystalline solids may be classified into four categories- molecular solids, ionic solids, covalent solid and metallic solids.
- The three dimensional arrangement of structural units or constituent particles (atoms, molecules or ions) in a crystal is called lattice.
- Unit cell is the smallest three dimensional group of lattice points, which when repeated in three dimensions in space, gives the whole lattice of the crystal.
- The number of nearest neighbor with which a given particle is in direct contact in a crystal is called the coordination number.
- The unoccupied or vacant sites present in the lattice of a crystal are called voids
- The defect which arises when some of the lattice points are unoccupied are called Schottky defect.
- The defect which arises when an ion (generally a cation) leaves its lattice site and occupies an interstitial site is called Frenkel defect.
- The electrons trapped in anion vacancies are called F-centers and impart colour to the crystals.

WELLAND GOULDSMITH SCHOOL, Patuli

Chemistry Worksheet

Subject: CHEMISTRY

Class XII

Total Questions 2

Time: 30 Minutes

WORKSHEET-1

Question 1:

- A. Name different types of crystalline solids.
- B. What is a unit cell?
- C. What is a void?
- D. What is a coordination number in two dimensional hexagonal close packing?
- E. What are F-centers?

Question 2:

- (i). What are the main characteristics of crystalline solids?
- (ii). Explain why the hexagonal close packing is more efficient than square close packing when considered in a plane.
- (iii). What is Schottky defect? How does it differ from Frenkel defect?
- (iv). Calculate the number of particles per unit cell in a
 - (a) simple cubic system
 - (b) body-centred cubic system
 - (c) face-centered cubic system

Exercise:

From the book (pgs- 43, 46) solve-

43- Choose the correct option (1 to 10)

46- True or False (1 to 10)

Fill in the blanks (1 to 8)