

Class-XII
CHEMISTRY (043)
Chapter-1 (The Solid State)
ASSIGNMENT-1

(One mark)

1. Why are solids rigid?
2. Why do solids have definite volume?
3. Why is glass considered a super cooled liquids?
4. Ionic solids conduct electricity in molten state but not in solid state. Explain
5. What types of solids are electrical conductors, malleable and ductile?
6. What is unit cell?
7. Write the type of unit cell.
8. Give the significance of a Lattice point.
9. Name the parameters that characterize a unit cell.
10. Distinguish between:
 - (i) Hexagonal and monoclinic unit cells
 - (ii) Face-centered and end –centered unit cell.

11. Explain how much portion of an atom located at (i) corner and (ii) body centre
Of a cubic unit cell is part of its neighboring unit cell.
12. What is meant by the term Coordination number?

(Two mark)

13. Explain :(i) The basis of similarities and differences between metallic and ionic Crystals
(ii) Ionic solids are hard and brittle.
14. Calculate the efficiency of packing in case of a metal crystal for
 - (i) Simple Cubic
 - (ii) body centered cubic
 - (iii) face centered cubic (with the Assumptions that atom is touching each other).
15. Silver crystallizes in fcc lattice. If the edge length of the cell is 4.07×10^{-8} cm and density is 10.5gcm^{-3} . Calculate the atomic mass of silver.
16. Niobium crystallizes in body centered cubic structure. if density is 8.55gcm^{-3} . Calculate atomic radius of niobium using atomic mass of silver.
17. In terms of band theory, what is the difference?
 - (i) Between a conductor and a semiconductor
 - (ii) Between a conductor and a semiconductor.
18. Explain the following terms with suitable examples:
 - (i) Schottky defect
 - (ii) Frenkel defect
 - (iii) Interstitials defect
 - (iv) F-center

**Books prescribed for class XII: NCERT TEXT BOOK, e- Books are available on Diksha app.
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Split up of marks: Written Exam (Theory)- 70

Practical Exam - 30