
Class XII – Chemistry (The Solid State)

1. The window panes of the old buildings are thick at the bottom. Why?
2. Graphite is soft and good conductor of electricity. Explain.
3. What is the contribution of an atom per unit cell if the atom is:
 - a) At the corner of the cube.
 - b) On the face of the cube.
 - c) In the centre of the cube.
4. A compound formed by A & B crystallizes in the cubic structure where 'A' are at the corners of the cube and 'B' are at the face centre. What is the formula of the compound?
5. Calculate the no. of atoms in a cubic based unit cell having one atom on each corner and two atoms on each body diagonal.
6. What is the no. of octahedral and tetrahedral voids present in a lattice?
7. An element crystallizes in BCC structure. The edge of its unit cell is 288 pm. If the density is 7.2 g/cm^3 , calculate the atomic mass of the element.
8. The compound CuCl has ZnS structure and the edge length of the unit cell is 500pm. Calculate the density. (Atomic masses: Cu = 63, Cl = 35.5, Avogadro no = $6.02 \times 10^{23} \text{ mol}^{-1}$)
9. In a compound, B ions form a close packed structure & A ions occupy all the tetrahedral voids. What is the formula of the compound?
10. In crystalline solid, anions C are arranged in cubic close packing, cations A occupy 50% of tetrahedral voids & cations B occupy 50% of octahedral voids. What is the formula of solid?