

Very short answer questions: solved (1mark)

Q1. What is the non-stoichiometry defect in crystals?

Ans. The defects due to which ratio of positive and negative ions in the compound differ from that required by ideal chemical formula are called non stoichiometry defect. It is due to excess or deficiency of one of the components.

Q2. What is the effect of Frenkel structural defect on the electrical conductance of a crystalline solid?

Ans. Electrical conductance will increase.

Q3. On heating crystal of KCl in Potassium vapour the crystal start exhibiting a violet colour. Why?

Ans. It is due to formation of F-centre (electrons trapped inside of anions) which absorb light from visible region and radiate violet colour.

Q4. Which 'point defect' lowers the density of ionic crystal?

Ans. Schottky defect.

Q 5. What is meant by 'point defects' in crystals?

Ans. Point defects are defects caused by missing or misplaced ion or atom in the crystal lattice i.e., deviation from regular arrangement of ions/Particles in the crystal.

Q 6. Define dislocation in crystals?

Ans. When defects extend along a line are called line defects or dislocation.

Q 7. Explain the term 'dislocations' in relation to crystals?

Ans. Line defect in a crystal is called dislocation.

Q 8. What is the crystal coordination number of lead if it has a face centred cubic structure?

Ans. Twelve.

Q 9. What happens when Fe_3O_4 is heated at 850 K and why?

Ans. It becomes Paramagnetic due to randomisation of spin.