

Model Question Paper**Solid State - II - Part I**

12th Standard

ChemistryReg.No. :

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I. Answer all the questions.

II. Use Blue pen only.

Time : 01:00:00 Hrs

Total Marks : 45

5 x 1 = 5

Section-A

- 1) The number of chloride ions that surrounds the central Na^+ ion in NaCl crystal is _____
(a) 12 (b) 8 (c) 6 (d) 4
- 2) The Bragg's equation is
(a) $\lambda = 2d \sin\theta$ (b) $nd = 2\lambda \sin\theta$ (c) $2\lambda = nd \sin\theta$ (d) $n\lambda = 2d \sin\theta$
- 3) A regular three dimensional arrangement of identical points in space is called
(a) Unit cell (b) Space lattice (c) Primitive (d) Crystallography
- 4) The smallest repeating unit in space lattice which when repeated over and again results in the crystal of the given substance is called
(a) Space lattice (b) Crystal lattice (c) Unit cell (d) Isomorphism
- 5) The crystal structure of CsCl is
(a) Simple cubic (b) face-centered cubic (c) Tetragonal (d) Body centered cubic

Section-B

5 x 3 = 15

- 6) Define the terms; space lattice and unit cell.
- 7) State Bragg's law.
- 8) What are superconductors?
- 9) Sketch the (a) simple cubic (b) face-centered cubic and (c) body-centered cubic lattices. (or) What are the three types of cubic system?
- 10) How crystals are classified?

Section-C

5 x 5 = 25

- 11) What is Bragg's equation? Give its significance.
- 12) Write the properties of ionic crystals.
- 13) Explain Schottky and Frenkel defects in crystals
- 14) What is super conductivity? Give its uses.
- 15) Explain AB and AB_2 type ionic crystals with one example for each.
