Model Question Paper

Solid State - II - Part V

12th Standard

Chemistry

Reg.No. : | | | | | | |

I.Answer all the questions.

II.Use Blue pen only.

Time : 01:00:00 Hrs

Total Marks : 50

Section-A

6 x 1 = 6

1) The essential condition for diffraction to occur is given by

(a) Schrodinger equation (b) Laue equation (c) Van't Hoff equation (d) Bragg's equation

2) Which one of the following is the method of studying crystal using X-rays?

(a) Laue experiment (b) Bragg's spectrometer method (c) Frenkel method (d) Schottky method

3) Ionic crystals are _____ in the solid state.

(a) conductors (b) super conductors (c) insulators (d) semi conductors

4) In Bragg's spectrometer method the current of ionisation is a direct measure of

(a) glancing angle (b) intensity of reflected beam (c) angle of incidence (d) inter atomic distance

5) Which one of the following has AB type crystal with co-ordination number 4?

(a) CsCl (b) Tio_2 (c) ZnS (d) BN

6) The total number of atoms per unit in a simple cubic lattice is

(a) 1 (b) 2 (c) 3 (d) 4

Section-B

2 x 3 = 6

7) How do semiconductors conduct electricity?

8) What is superconductivity?

Section-C

5 x 5 = 25

9) Write notes on (i) Schottky defects (ii) Frenkel defects

10) Explain metal excess and metal deficiency defects

11) Explain different types of crystals

12) Discuss the structure of CsCl and TiO_2

13) Sketch the(a) Simple cubic(b)Fcc and(c)bcc(d)edgecentred cubic lattices

Section-D

2 x 10 = 20

14) a) What are amorphous solids?

b) How is glassay substance formed?

15) a) What are the types of cubic system?

b) What is a vitreous state?

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