

DPP

DAILY PRACTICE PROBLEMS

CLASS : XIIth
DATE :

SUBJECT : CHEMISTRY
DPP No. : 1

Topic :- THE SOLID STATE

- Schottky defect generally appears in
 - NaCl
 - KCl
 - CsCl
 - All of these
- Which arrangement of electrons leads ferromagnetism?
 - $\uparrow\uparrow\uparrow\uparrow$
 - $\uparrow\downarrow\uparrow\downarrow$
 - $\uparrow\uparrow\downarrow\downarrow$
 - None of these
- The crystal are bounded by plane faces (f), straight edges (e) and interfacial angel (c). The relationship between these is :
 - $f + c = e + 2$
 - $f + e = c + 2$
 - $c + e = f + 2$
 - None of these
- The melting point of RbBr is 682°C , while that of NaF is 988°C . The principle reason that melting point of NaF is much higher than that of RbBr is that :
 - The two crystals are not isomorphous
 - The molar mass of NaF is smaller than that of RbBr
 - The internuclear distance $r_c + r_a$ is greater for RbBr than for NaF
 - The bond in RbBr has more covalent character than the bond in NaF.
- If a crystal lattice of a compound, each corner of a cube is enjoyed by sodium, each edge of a cube has oxygen and centre of a cube is enjoyed by tungsten (W), then give its formula
 - Na_2WO_4
 - NaWO_3
 - Na_3WO_3
 - Na_2WO_3
- In antifluorite structure, the negative ions:
 - Occupy tetrahedral voids
 - Occupy octahedral voids
 - Are arranged in ccp
 - Are arranged in hcp
- An insulator oxide is :
 - CuO
 - C_2O
 - Fe_2O_3
 - All of these
- A solid with high electrical and thermal conductivity from the following is :
 - Si
 - Li
 - NaCl
 - ice
- The radius ratio $\left(\frac{r_+}{r_-}\right)$ of an ionic solid (A^+B^-) is 0.69. What is the coordination number of B^- ?
 - 6
 - 8
 - 2
 - 10
- The axial angles in triclinic crystal system are
 - $\alpha = \beta = \gamma = 90^\circ$
 - $\alpha = \gamma = 90^\circ, \beta \neq 90^\circ$
 - $\alpha \neq \beta \neq \gamma \neq 90^\circ$
 - $\alpha = \beta = \gamma \neq 90^\circ$
- In NaCl crystal each Cl^- ion is surrounded by
 - 4 Na^+ ions
 - 6 Na^+ ions
 - 1 Na^+ ion
 - 2 Na^+ ions

12. For an ionic crystal of the general formula A^+B^- and co-ordination number 6, the radius ratio will be :
- Greater than 0.73
 - Between 0.73 and 0.41
 - Between 0.41 and 0.22
 - Less than 0.22
13. The ratio of cations to anion in a octahedral close packing is :
- 0.414
 - 0.225
 - 0.02
 - None of these
14. Electrons in a paramagnetic compound are
- Shared
 - Unpaired
 - Donated
 - Paired
15. Crystals which are good conductor of electricity and heat are known as :
- Ionic crystals
 - Covalent crystals
 - Metallic crystals
 - Molecular crystal
16. An element has bcc structure having unit cells 12.08×10^{23} . The number of atoms in these cells is :
- 12.08×10^{23}
 - 24.16×10^{23}
 - 48.38×10^{23}
 - 12.08×10^{22}
17. Among the following types of voids, which one is the largest void?
- Triangular
 - Cubic
 - Tetrahedral
 - Octahedral
18. The crystalline structure of NaCl is
- Hexagonal close packing
 - Face centred cubic
 - Square planar
 - Body centred cubic
19. Metals have conductivity of the order of ($\text{ohm}^{-1} \text{cm}^{-1}$) :
- 10^{12}
 - 10^8
 - 10^2
 - 10^{-6}
20. Of the elements Sr, Zr, Mo, Cd and Sb, all of which are in V period, the paramagnetics are:
- Se, Cd and Sb
 - Zr, Mo and Cd
 - Sr, Zr and Cd
 - Zr, Mo and Sb