CUET Chemistry Multiple-Choice Questions

Q.1. Which of the following does not represent a type of crystal system?
(a) Triclinic (b) Monoclinic
(c) Rhombohedral (d) Isotropical

A.1. (d)

Q.2. Which of the following is a colligative property?
(a) Lowering of vapour pressure
(b) Osmotic pressure
(c) Boiling point
(d) Change in entropy

A.2. (b)

Q.3. If three elements X, Y, and Z crystallise in a *ccp* lattice with *X* atoms at the corners, *Y* atoms at the cube centre and *Z* atoms at the edges, the formula of the compound will be
(a) XYZ (b) XYZ_2 (c) XYZ_3 (d) X_2Y_2Z

A.3. (c)

Q.4. 18 g glucose ($C_6H_{12}O_6$) is added to 178.2 g water. The vapour pressure of water (in torr) for this aqueous solution is
(a) 7.6 (b) 76.0 (c) 752.4 (d) 759.0

A.4. (c)

Q.5.Monoclinic sulphur is an example of monoclinic crystal system. What are the characteristics of the crystal system?
(a) $a \neq b \neq c$, $\alpha = \square = \gamma = 90°$
(b) $a \neq b \neq c$, $\alpha \neq \square \neq \gamma \neq 90°$
(c) $a = b \neq c$, $\alpha = \square = \gamma = 90°$
(d) $a \neq b \neq c$, $\alpha = \gamma = 90°$, $\square \neq 90°$

A.5. (d)

Q.6. 5.5 mg of nitrogen gas dissolves in 180 g of water at 273 K and one atm pressure due to nitrogen gas. The mole fraction of nitrogen in 180 g of water at 5 atm nitrogen pressure is approximately
(a) 1×10^{-6} (b) 1×10^{-5}
(c) 1×10^{-3} (d) 1×10^{-4}

A.6. (c)

Q.7. How many chloride ions are surrounding sodium ions in sodium chloride crystal?
(a) 4 (b) 8 (c) 6 (d) 12

A.7. (c)

Q.8. On mixing 20 mL of acetone with 60 mL of chloroform, the total volume of the solution is
(a) less than 80 mL (b) more than 80 mL
(c) equal to 80 mL (d) unpredictable

A.8. (a)

Q.9. The edge length of the sodium chloride unit cell is 564 pm. If the size of Cl^- ion is 181 pm. The size of Na^+ ion will be
(a) 101 pm (b) 181 pm (c) 410 pm (d) 202 pm

A.9. (a)