

## ECAT Chemistry Chapter 9 Solutions

Sr	Questions	Answers Choice
1	The molal depression constant depends upon	A. Nature of solute B. Nature of solvent C. $\Delta H_{\text{solution}}$ D. Vapour pressure of solution
2	Which one of the following solution will have higher vapour pressure than that of water	A. Aqueous solution of methanol B. Aqueous solution of HCl C. Aqueous solution of glucose D. Aqueous solution of urea
3	Which of the following solutions has the highest boiling point ?	A. 5.85% solution of sodium chloride. B. 18.0% solution of glucose. C. 6.0% solution of urea. D. All have same boiling points.
4	The molarity of toluene solution in benzene is 0.22 if 5 grams of toluene dissolved, then mass of benzene is grams is	A. 267 B. 260 C. 240 D. 247
5	If 5.85 g of NaCl are dissolved in 90 g of water, the mole fraction of NaCl is	A. 0.1 B. 0.01 C. 0.2 D. 0.0196
6	A solution contains $1.2046 \times 10^{24}$ hydrochloric acid molecules in one $\text{dm}^3$ of the solution. The strength of the solution is	A. 6 N B. 2 N C. 4 N D. 8 N
7	Units of molarity are	A. gm/lit B. mol/lit C. kg/lit D. None of these
8	Freezing point depression is measured by	A. Beckmann's apparatus B. Lands Berger's method C. Antifreeze apparatus D. All of the above
9	The osmotic pressure of a dilute solution is directly proportional to the	A. Diffusion rate of the solute B. Ionic concentration C. Elevation in boiling point D. Flow of solvent from a concentrated to a dilute solution
10	Which is not a colligative property?	A. Osmotic pressure B. Lowering of vapour pressure C. Depression of freezing point D. Elevation of boiling point
11	A solution of 0.5 mole camphor in 100 grmas chloroform ( $K_b = 0.322$ ) has rise in boiling point than that of chloroform by	A. $0.81^\circ\text{C}$ B. $1.61^\circ\text{C}$ C. $1.81^\circ\text{C}$ D. $0.61^\circ\text{C}$
12	Which statement is incorrect for and ideal solution	A. The forces of attractions between solute and solvent molecules are same B. There is no evolution or absorption of heat C. Volume of the solution is less than sum of volumes of individual components D. Vapour pressure of solution is directly proportional to the mole fraction of solvent
13	Which of the following aqueous solutions have the lowest freezing point	A. 5.85% NaCl B. 6% urea C. 34.2 sucrose D. All of them have same freezing points
14	A one thousand $\text{dm}^3$ sample of water contains one gram of iron (iii) ions what is the concentration in parts per million of $\text{Fe}^{3+}(\text{eq})$ in parts per million	A. 0.001 B. 0.01 C. 0.1 D. 1

D. 1.0

15	When the solute is present in trace quantities the following expression is used	A. Gram per million B. Milligram percent C. Microgram percent D. Parts per million
16	At 25°C, the highest osmotic pressure is exhibited by 0.1 M solution of	A. $\text{CaCl}_2$ B. KCl C. Glucose D. Urea
17	Azeotropic mixture of HCl and water has	A. 48% HCl B. 22.2% HCl C. 36% HCl D. 20.2% HCl
18	Which of the following solution has the highest boiling point	A. 5.85% solution of sodium chloride B. 18.0% solution of glucose C. 6.0% solution of urea D. All have the same boiling point
19	Which of the following mixture of liquids show negative deviation from Raoult's law	A. Ethyl alcohol and ether B. HCl and water C. Phenol- water D. Chlorobenzene-bromobenzene
20	Solubility of a substance in water decreases with rise in temperature except	A. $\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$ B. $\text{Pb}(\text{NO}_3)_2$ C. $\text{K}_2\text{Cr}_2\text{O}_7$ D. $\text{Ce}_2(\text{SO}_4)_3$