

## ECAT Chemistry Chapter 9 Solutions Online Test

Sr	Questions	Answers Choice
1	Elevation of boiling point is measured by	A. Beckmann's apparatus B. Lands Berger's method C. Antifreeze apparatus D. None of these above
2	A Solution containing 6.8 g of non-ionic solute in 100g of water was found to freeze at -0.93°C. If $K_f$ for water is 1.86 and molecular mass of solute is	A. 13.6 B. 34 C. 68 D. 136
3	Which of the following liquid pairs shown a positive deviation from Raoult's law	A. $\text{CH}_3\text{COOH} + \text{CH}_3\text{Cl}$ B. $\text{C}_6\text{H}_6 + \text{CH}_3\text{OH}$ C. $\text{H}_2\text{O} + \text{HCl}$ D. $\text{H}_2\text{O} + \text{HNO}_3$
4	Which statement is incorrect for an 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
5	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
6	Which one of the following mixture shows positive deviation from Raoult's law and forms an azeotrope with minimum boiling point	A. Methanol + $\text{CCl}_4$ B. Methanol + acetone C. Ether + HCl D. Acetone + chloroform
7	Which of the following has the highest freezing point at one atmosphere	A. 0.1 M NaCl B. 0.1 M sugar solution C. 0.1 M $\text{BaCl}_2$ D. 0.1 M $\text{FeCl}_2$ solution
8	Which one of the following is an ideal solution that obeys Raoult's law	A. Ethanol + water B. Benzene + toluene C. HCl + water D. Acetone + chloroform
9	The sum of mole fractions (X) of components of solution is equal to	A. 100 B. 200 C. One D. Zero
10	The boiling point of an azeotropic mixture of water and ethyl alcohol is less than that of water and alcohol. The mixture shows	A. That solution is highly saturated B. No deviation from Raoult's law C. Positive deviation from Raoult's law D. Negative deviation from Raoult's law
11	Mixture of alcohol and water can be separated by	A. Solvent extraction techniques B. Crystallization C. Precipitation and filtration D. Fractional distillation
12	Hydrolysis of potassium acetate produces	A. Acidic solution B. Neutral solution C. Basic solution D. None of these
13	Cane sugar is not soluble in benzene but soluble in water because	A. Cane sugar is a macro molecule B. Cane sugar is an ionic compound C. Cane sugar has hydrogen bonding D. Cane sugar is an organic molecule

14	Freezing point depression is measured by	A. Beckmann's apparatus B. Lands Berger's method C. Antifreeze apparatus D. All of the above
15	Zeotropic mixture	A. Obey Henry's law B. Obey Raoult's law C. Does not obey Raoult's law D. Obey Dalton's law
16	Dust particles in smoke is a solution of the type	A. Liquid is solute and solid is solvent B. Solid is solute and liquid is solvent C. Solid is solute and gas is solvent D. Gas is solute and solid is solvent
17	The substance which contains the water of crystallization is called	A. Hydrated B. Solvated C. Crystal D. None
18	The number of moles of $\text{NH}_4\text{Cl}$ dissolved in $500\text{ cm}^3$ of its 15%, W/N solution is	A. 1 mole B. 1.4 mole C. 2.0 mole D. 2.4 mole
19	A solution containing 5.8 grams acetone ( $\text{CH}_3\text{OCH}_3$ ), 4.6 gram ethyl alcohol ( $\text{C}_2\text{H}_5\text{OH}$ ) and 12 grams chloroform ( $\text{CHCl}_3$ ) has mole fraction and mole percent of acetone	A. 0.11, 10% B. 0.33, 33% C. 0.22, 22% D. 0.11, 33%
20	A solution consisting of 92 grams ethyl alcohol ( $\text{C}_2\text{H}_5\text{OH}$ ) 96 grams methyl alcohol ( $\text{CH}_3\text{OH}$ ) 90 grams water the mole fraction and mole percent of methyl alcohol is	A. 0.3, 30% B. 0.2, 30% C. 0.5, 30% D. 0.2, 20%
21	17.1 grams sucrose ( $\text{C}_{12}\text{H}_{22}\text{O}_{11}$ ) dissolved in $250\text{ cm}^3$ of solution. This has molarity	A. 0.1 M B. 0.2 M C. 0.01 M D. 0.02 M
22	$50\text{ cm}^3$ of 0.05 molar urea ( $\text{N}_2\text{H}_4\text{CO}$ ) solution has % W/N concentration	A. 6% B. 3% C. 0.3 % D. 0.6 %
23	10% aqueous solution of NaCl has molarity	A. 1.7 M B. 2.7 M C. 0.17 M D. 3.7 M
24	0.1 molar glucose ( $\text{C}_6\text{H}_{12}\text{O}_6$ ) solution has the % W/N	A. 1.8% B. 18% C. 0.18% D. 2.8%
25	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
26	The term cryoscopy is used for	A. Depression of freezing point B. Elevation in boiling point C. Lowering of vapour pressure D. Osmotic pressure
27	The molarity of the solution containing x grams $(\text{NH}_4)_2\text{SO}_4$ in $500\text{ cm}^3$ of the solution is 0.6 what is x	A. 39.6 B. 45.1 C. 40.5 D. 42.7
28	The amount of solute present in the given amount of solvent is called	A. Molarity B. Molality C. Concentration D. Solubility
29	The molarity of solution containing 14.5 grams urea ( $\text{N}_2\text{H}_4\text{CO}$ ) dissolved in $100\text{ cm}^3$ of the solution is	A. 1 molar B. 0.1 molar C. 0.2 molar D. 0.25 molar
30	What will be the molarity of solution if 103 g $(\text{NH}_4)_2\text{SO}_4$ is dissolved per $600\text{ cm}^3$ of water	A. 2.32 M B. 3.32 M C. 4.32 M D. 1.30 M