ECAT Chemistry Chapter 9 Solutions Online Test

Sr	Questions	Answers Choice
1	The weight of pure NaOH required to prepare 250 $cm^3$of 0.1 N solution is	A. 4 g B. 1 g C. 2 g D. 5 g
2	50 mL of 10 N H_2SO_4. 25mL of 12 N Hcl and 40 mL of 5N $HNO_3$are mixed and the volume of the mixture is made 100 mL by adding water. The normality of resulting will be	A. 1 N B. 2 N C. 3 N D. 9 N
3	0.5 M of $H_2SO_4$is diluted from 1 litre to 10 litre, normality of resulting solution is	A. 1 N B. 0.1 N C. 10 N D. 11 N
4	The vapour pressure of two liquids 'p' and 'Q' are 80 and 60 torr respectively. The total vapour pressure of solution obtained by mixing 3 mole of P and 2 mol of Q would be	A. 140 torr B. 20 torr C. 68 torr D. 72 torr
5	Ifα us the degree of dissociation of $Na_2SO_4$the vant Hoff's factor (1) used for calculating the molecular mass is	A. 1 +α B. 1 -α C. 1 + 2α D. 1 - 2α
6	The weight of pure NaOH required to prepare 250 $cm^3$of 0.1 N solution is	A. 4 g B. 1 g C. 2 g D. 5 g
7	Camphor is often used in molecular mass determination because	A. It is solvent for organic substances B. It is readily available C. It has a very high cryoscopic constant D. It is volatile
8	A solution contains 1.2046 x 10^{24}hydrochloric acid molecules in one $dm^3$of the solution. The strength of the solution is	A. 6 N B. 2 N C. 4 N D. 8 N
9	Maximum freezing point falls in	A. Camphor B. Naphthalene C. Benzene D. Water
10	Azeotropic mixture of HCl and water has	A. 48% HCl B. 22.2% HCl C. 36% HCl D. 20.2% HCl
11	The ionic strength of a solution containing 0.1 mole/kg of KCl and 0.2 mole/kg of $CuSO_4$is	A. 0.3 B. 0.6 C. 0.9 D. 0.2
12	Which of the statements given below concerning properties of solution, describe a colligative effect?	A. Boiling point of pure water decreases by the addition of ethanol B. Vapour pressure of pure water decreases by the addition of nitric acid C. Vapour pressure of pure benzene decreases by the addition of naphthalene D. Boiling point of pure benzene increases by the addition of toluene

13	If liquids A and B form an ideal solution	A. The enthalpy of mixing is zero B. The entropy of mixing is zero C. The free energy of mixing is zero D. The free energy as well as the entropy of mixing are each zero
14	At room temperature, the mole fraction of a solution in 0.25 and the vapour pressure of the solvent is 0.80 atm. Then the lowering of vapour pressure is	A. 0.75 B. 0.512 C. 0.80 D. 0.0512
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	The solubility of a gas in water depends upon	A. Nature of the gas B. Temperature C. Pressure of the gas D. All of the above
17	The depression of freezing point is directly proportional to	A. Mole fraction of the solution B. Molarity of the solution C. Molality of the solution D. Molarity of the solvent
18	The temperature at which the vapour pressure of a liquid becomes equal to external pressure is	A. Melting point B. Sublimation point C. Inversion point D. Boiling point
19	How much of NaOH is required to neutralize 1500 $cm^3$of 0.1 N HCl?	A. 60 g B. 6 g C. 4 g D. 40 g
20	Partial pressure of a solution component is directly proportional to its mole fraction. This statement is known as	A. Henry's law B. Raoult's law C. Distribution law D. Ostwald's dilution law
21	Which substances are mixed to form a buffer solution?	A. A strong acid and its salt of a strong base B. Strong acid and its salt of weak base C. Weak acid and its salt of strong base D. Weak acid and its salt of weak base
22	The osmotic pressure of 1 m solution at 27°C is	A. 2.46 atm B. 24.6 atm C. 1.21 atm D. 12.1 atm
23	How many g of dibasic acid (mol. wt. 200) should be present in 100 ml of the aqueous solution to give 0.1 Normality?	A. 1 g B. 2 g C. 10 g D. 20 g
24	Solutions with same osmotic pressures are called	A. Hypertonic B. Hypotonic C. Isotonic D. Normal
25	The relative lowering of vapour pressure is equal to the mole fraction of the solute, This law is called	A. Henry's law B. Raoult's law C. Ostwald's law D. Arrhenius law
26	Which one of the following is a colligative property?	A. Surface tension B. Osmotic pressure C. Viscosity D. Refractive index
27	Which of the following will have the highest boiling point at 1 atm pressure?	A. 0.1 M NaCl B. 0.1 M Sucrose C. 0.1 M BaCl₂ D. 0.1 M Glucose
28	Vant Hoff's factor of $Ca(NO_3)_2$is	A. 1 B. 2 C. 3 D. 4
29	Units of molarity are	A. gm/lit B. mol/lit C. kg/lit

		C. kg/lit D. None of these
30	What is the molarity of H_2SO_4 solution that has density of 1.84 gm/cc at 35°C and contains 98% by weight?	A. 4.18 M B. 8.14 M C. 18.4 M D. 18 M