

## Chemistry Fsc Part 1 Chapter 9 Online Test

| Sr | Questions  | Answers Choice  |
|----|--|---|
| 1  | Two solution of NaCl and KCl are prepared separately by dissolving same moles of them in the fixed amount of solvent. Which of the following statements is true for these solution | A. KCl solution will have higher boiling point than NaCl solution<br>B. Both the solutions have different boiling point<br>C. KCl and NaCl solution possess same vapour pressure<br>D. KCl solution possesses lower freezing point than NaCl solution |
| 2  | Which of the following solution s has the highest boiling point.   | A. 5.85% solution of sodium chloride<br>B. 18.0 % solution of glucose<br>C. 6.0% solution of urea<br>D. All have the same boiling point   |
| 3  | The molal boiling point constant is the ration of the elevation in boiling point to  | A. Molarity<br>B. Molality<br>C. Mole fraction of solvent<br>D. Mole fraction of solute   |
| 4  | The molar boiling point constant is the ratio of the elevation of boiling point to .   | A. Molarity<br>B. Molality<br>C. Mole fraction of solvent<br>D. Mole fraction of solute   |
| 5  | In case of non volatile solute, lowering of vapour pressure is proportional to.  | A. Mass fraction of solute<br>B. Mole fraction of solvent<br>C. Mole fraction of solute<br>D. None of the above   |
| 6  | Azeotropic mixture can be separated into pure components by  | A. Distillation<br>B. Fractional distillation<br>C. Vacuum distillation<br>D. None  |
| 7  | Water and Phenol are partially miscible to each other at room temperature when both liquids are mixed together which is upper layer.   | A. Water in Phenol<br>B. Phenol and water<br>C. Pure phenol<br>D. Pure water  |
| 8  | When an ionic compound is dissolved in water, it dissociate into positive and negative ions, which are surrounded by H <sub>2</sub> O molecule, This process is known as.          | A. Hydrolysis<br>B. Hydration<br>C. Saturation<br>D. solvolysis   |
| 9  | The temperature which partially immiscible pair of liquid leads to the formation of a single phase in called.  | A. Transition temperature<br>B. Absolute temperature<br>C. Consulate temperature<br>D. Room temperature   |
| 10 | A solution of sucrose is 34.2% The volume of solution containing one mole of solute.   | A. 500 cm <sup>3</sup><br>B. 1000 cm <sup>3</sup><br>C. 342 cm <sup>3</sup><br>D. 3420 cm <sup>3</sup>  |
| 11 | Which of the following mixtures of liquids show negative deviation   | A. Methyl alcohol water<br>B. Hydrochloric acid water<br>C. Carbon di sulphide chloroform<br>D. Chlorobenzene bromobenzene  |
| 12 | An aqueous solution of ethanol in water has vapour pressure.   | A. Equal to that of water<br>B. Equal to that of ethanol<br>C. More than that of water<br>D. Less than that of water  |
| 13 | The molal boiling point constant is the ratio of elevation of boiling point to   | A. Molarity<br>B. Mole fraction of solvent<br>C. Molality<br>D. Mole fraction of solute   |
| 14 | The molarity of 2% w/v NaOH solution is  | A. 2<br>B. 0.25<br>C. 0.05<br>D. 0.5  |

|    |   |   |
|----|---|---|
| 15 | 18 g glucose is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to.   | A. 1/5<br>B. 5.1<br>C. 1/51<br>D. 6   |
| 16 | In azeotropic mixture showing positive deviation from Raoult's law, the volume of the mixture is.   | A. slightly more than the total volume of the components<br>B. Slightly less than the total volume of the component<br>C. Equal to the total volume of the components<br>D. None of these                                 |
| 17 | Which one of the following salts dissolved in water to form a solution with a pH greater than 7     | A. NaCl<br>B. CuSO <sub>4</sub><br>C. Na <sub>2</sub> CO <sub>3</sub><br>D. NH <sub>4</sub> Cl  |
| 18 | Which pair of mixture is called ideal solution.   | A. Chlorobenzene and bromobenzene<br>B. Water alcohol<br>C. Water ether<br>D. HCl and water   |
| 19 | In a solution 7.8 g of benzene and 46 g of toluene is present The mole fraction of benzene is.      | A. 1/2<br>B. 1/3<br>C. 1/5<br>D. 1/6  |
| 20 | The liquid pair which is not completely miscible is   | A. CH <sub>3</sub> OH and water<br>B. Alcohol and water<br>C. Phenol and water<br>D. Benzene and toluene  |
| 21 | 10 g of NaOH have been dissolved per kg of solvent The molality of solution.                        | A. 0.25 m<br>B. 0.5 m<br>C. 1.0 m<br>D. 2.0 m   |
| 22 | 18 g of glucose is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to | A. 1/5<br>B. 5.1<br>C. 1/51<br>D. 6   |
| 23 | The unit of mole fraction is  | A. Moles dm <sup>-3</sup><br>B. Moles kg <sup>-1</sup><br>C. Gram dm <sup>-3</sup><br>D. None   |
| 24 | Solubility curve of CaCl <sub>2</sub> ·6H <sub>2</sub> O shows                                      | A. Decrease in solubility with increase of temperature<br>B. Increase in solubility with increase of temperature<br>C. Discontinuous increase in solubility with temperature<br>D. No effect of temperature on solubility |
| 25 | Unit of mole fraction is  | A. mol dm <sup>-3</sup><br>B. mol kg <sup>-1</sup><br>C. g dm <sup>-3</sup><br>D. No unit   |
| 26 | Colligative properties are the properties of.   | A. Dilute solution which behave as nearly ideal solutions<br>B. Concentrated solutions which behave as nearly non ideal solutions<br>C. Both a and b<br>D. Neither a nor b  |
| 27 | In azeotropic mixture showing positive deviation from Raoult's law the volume of the mixture is     | A. Slightly more than the total volume of the components<br>B. Slightly less than the total volume of the components<br>C. Equal to the total volume of the components<br>D. None of these                                |
| 28 | Molal boiling point elevation depends upon  | A. Nature of solvent<br>B. Nature of solute<br>C. Vapour pressure of solution<br>D. None of these   |
| 29 | Melting of ice can be forwarded by the use of.  | A. LiCl<br>B. BeCl <sub>2</sub><br>C. NaCl<br>D. AgCl   |
|    |   | A. 5.85% solution of sodium chloride<br>B. 18.0% solution of glucose  |

|    |   |  |
|----|---|--|
| 30 | Which of the following solutions has the highest boiling point  | B. 10.0% solution of glucose<br>C. 6.0% solution of urea<br>D. All have the same boiling points  |
| 31 | Depression in the F.P is directly proportional to   | A. Molarity of solution<br>B. Molarity of solvent<br>C. Molality of solvent<br>D. Molality of solution   |
| 32 | Solubility of which substance decreases by increasing temperature.  | A. NaNO <sub>3</sub><br>B. KNO <sub>2</sub><br>C. NaCl<br>D. Ce <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub>   |
| 33 | The vapour pressure of an aqueous solution of glucose is.   | A. Equal to vapour pressure of water<br>B. Independent of temperature<br>C. More than vapour pressure of pure water<br>D. Less than vapour pressure of pure water        |
| 34 | Upper consolute temperature for water phenol system is.   | A. 150 °C<br>B. 65.9 °C<br>C. 120 °C<br>D. 130 °C  |
| 35 | 18 g glucose is dissolved in 90 g of water. The relative lowering of vapour pressure is equal to.                           | A. 1/5<br>B. 5/1<br>C. 1/51<br>D. 6  |
| 36 | What amount of NaOH is required to prepare 500 g of 0.5 molal solution.   | A. 10 g<br>B. 20 g<br>C. 30 g<br>D. 40 g   |
| 37 | Which one of the following salts dissolved in water to form a solution with a pH lesser than 7                              | A. NaCl<br>B. CuSO <sub>4</sub><br>C. Na <sub>2</sub> CO <sub>3</sub><br>D. NH <sub>4</sub> Cl   |
| 38 | Molal boiling constant for water is 0.52 °C. If 6 g of urea is dissolved in 100 g of water, what will be its boiling point. | A. 100.52 °C<br>B. -100.52 °C<br>C. 100 °C<br>D. 99 °C   |
| 39 | The relative lowering of vapour pressure is equal to the mole fraction of the solute. This law is known as                  | A. Ostwald dilution law<br>B. Raoult's law<br>C. Vant hoff's law<br>D. Henry's law   |
| 40 | Salt of weak acid with strong base when dissolved in water gives.   | A. Acidic solution<br>B. Basic solution<br>C. Neutral solution<br>D. None of above   |
| 41 | Colligative properties are used to determine the  | A. Freezing points<br>B. Boiling point<br>C. Atomic mass of an element<br>D. Molar mass of solute  |
| 42 | 10 g of NaOH has been dissolved per dm <sup>3</sup> of solution. The molarity of solution is.                               | A. 0.5 M<br>B. 0.25 M<br>C. 1 M  |
| 43 | Heat of solution of an ionic compound is equal to.  | D. 2 M<br>A. Hydration energy<br>B. Lattice energy<br>C. Sum of both 'a' and 'b'<br>D. Difference of both a and b  |
| 44 | Colligative properties are the properties of  | A. Dilute solutions which behave as nearly ideal solution<br>B. Concentrated solution which behave as nearly non-ideal solution<br>C. Both a and b<br>D. Neither a nor b |
| 45 | Depression of freezing point method is used for determination of molar masses of  | A. Electrolytes<br>B. Non-volatile solids<br>C. Volatile solids<br>D. Volatile liquids   |
| 46 | Which of the following solutions will have the highest boiling point  | A. 0.1 M NaCl<br>B. 0.1 M CaCl <sub>2</sub><br>C. 0.1 M FeCl <sub>3</sub><br>D. 0.1 M glucose  |
|    |   | A. Obey Raoult's law   |

|    |   |  |
|----|---|--|
| 47 | Azeotropic mixture  | B. Do not obey Raoult's law<br>C. Boils at low temperature only<br>D. Boils at high temperature only   |
| 48 | Molarity of pure water is   | A. 1<br>B. 18<br>C. 55.5<br>D. 6   |
| 49 | Azeotropic mixture of two liquids boils at a lower temperature than either of them, when  | A. It is saturated<br>B. Is shows positive deviation from Raoult's law<br>C. It shows negative deviation from Raoult's law<br>D. Is is metastable  |
| 50 | Solubility of which substance decreases by increasing temperature.  | A. $\text{NaNO}_3$<br>B. $\text{KNO}_2$<br>C. $\text{NaCl}$<br>D. $\text{Ce}_2(\text{SO}_4)_3$   |
| 51 | A solution of glucose is 10% The volume in which 1 g mole of it dissolved will be.  | A. 1 dm <sup>3</sup><br>B. 1.8 dm <sup>3</sup><br>C. 900 cm <sup>3</sup><br>D. 200 cm <sup>3</sup>   |
| 52 | An azeotropic mixture of two liquids boils at lower temperature than either of them when.   | A. It is saturated<br>B. It shows positive deviation from Raoult's law<br>C. It shows negative deviation from Raoult's law<br>D. It is metastable  |
| 53 | Which solution is an example of solid in gas  | A. Fog<br>B. Steel<br>C. smoke<br>D. Air   |
| 54 | Relative lowering of vapour pressure is equal to.   | A. Mole fraction of solute<br>B. Mole fraction of solvent<br>C. Mole fraction of solute and solvent<br>D. Molality of solution   |
| 55 | When an ionic compound is dissolved in water, it dissociate into positive and negative ions, which are surrounded by $\text{H}_2\text{O}$ molecule, This process is known as.           | A. Hydrolysis<br>B. Hydration<br>C. Saturation<br>D. solvolysis  |
| 56 | Two solutions of $\text{NaCl}$ and $\text{KCl}$ are prepared separately by dissolving same amount of the solute in water. Which of the following statements is true for these solution. | A. $\text{KCl}$ solution will have higher boiling point than $\text{NaCl}$ solution<br>B. Both the solutions have different boiling point<br>C. $\text{KCl}$ and $\text{NaCl}$ solutions possess same vapour pressure<br>D. $\text{KCl}$ solution possesses lower freezing point than $\text{NaCl}$ solution |
| 57 | Butter is solution of   | A. Liquid in liquid<br>B. Solid and liquid<br>C. Liquid and solid<br>D. Liquid and gas   |
| 58 | Which one of the following salts dissolved in water to form a solution with a pH greater than 7   | A. $\text{NaCl}$<br>B. $\text{CuSO}_4$<br>C. $\text{Na}_2\text{CO}_3$<br>D. $\text{NH}_4\text{Cl}$   |
| 59 | A negative deviation from Raoult's law in solution means, the solution has  | A. High boiling point and high vapour pressure<br>B. High boiling point and low vapour pressure<br>C. Low boiling point and low vapour pressure<br>D. Low boiling point and high vapour pressure   |
| 60 | The molal boiling point constant is the the ratio of the elevation in boiling point to.   | A. Molarity<br>B. Molality<br>C. Mole fraction of solvent<br>D. Mole fraction of solute  |
| 61 | Relative lowering of vapour pressure is equal to.   | A. Mole fraction of solute<br>B. Mole fraction of solvent<br>C. Molarity<br>D. Molality  |
| 62 | An aqueous solution of ethanol in water has vapour pressure   | A. Equal to that water<br>B. Equal to that of ethanol<br>C. More than that of  |

$H_2O$   
D. less than that of water

63 An aqueous solution of ethanol is water has vaporu pressure.  
A. Equal to the of water  
B. Equal to that of ethanol  
C. More than that of  $H_2O$   
D. Less than that of water

64 Which concentration unit is independent of temperature.  
A. Molarity  
B. Molality  
C. ppm  
D. both a and b

65 A solution of glucose is 10% to volume in which 1 g mole of it is dissolved will be  
A.  $1\text{ dm}^3$   
B.  $1.8\text{ dm}^3$   
C.  $200\text{ cm}^3$   
D.  $900\text{ cm}^3$

66 The sum of mole percent of all the components of solution is always equal to.  
A. Unity  
B. 100  
C. Less than one  
D. Less than 100

67 Which one of the following salts do not hydrolyses  
A.  $CuSO_4$   
B.  $Na_2CO_3$   
C.  $NaCl$   
D.  $AlCl_3$