

SOLUTION

1. Which of the following is a true solution?

- A) Milk
- B) Blood
- C) Salt in water
- D) Smoke

2. A solution is a:

- A) Homogeneous mixture
- B) Heterogeneous mixture
- C) Compound
- D) Colloid

3. The component present in a larger amount in a solution is called:

- A) Solute
- B) Solvent
- C) Colloid
- D) Suspension

4. Which of the following is not a colligative property?

- A) Boiling point elevation
- B) Freezing point depression
- C) Vapour pressure lowering
- D) Density

5. A solution that cannot dissolve any more solute at a given temperature is:

- A) Unsaturated
- B) Supersaturated
- C) Saturated
- D) Dilute

6. Molarity is defined as:

- A) Moles of solute / Volume of solvent (L)
- B) Moles of solute / Volume of solution (L)
- C) Moles of solute / Mass of solvent (kg)
- D) Volume of solute / Volume of solution

7. Which of the following affects solubility of a solid in a liquid?

- A) Temperature
- B) Pressure
- C) Volume
- D) Surface area

8. What happens to the boiling point of a solution when a non-volatile solute is added?

- A) Increases
- B) Decreases
- C) Remains same
- D) Becomes zero

9. Which concentration unit is temperature-dependent?

- A) Molarity
- B) Molality
- C) Mole fraction
- D) Mass percent

10. Henry's law relates:

- A) Gas solubility and temperature
- B) Gas solubility and pressure
- C) Vapor pressure and temperature
- D) Boiling point and pressure

11. Molality is:

- A) Moles of solute / Volume of solvent
- B) Moles of solute / Mass of solvent (kg)
- C) Moles of solute / Volume of solution
- D) Moles of solute / Mass of solution

12. What is the mass percent of NaCl in a solution containing 20g NaCl in 100g water?

- A) 20%
- B) 16.67%
- C) 25%
- D) 10%

13. Which of the following is a supersaturated solution?

- A) Contains more solute than it can hold at a given temperature
- B) Contains less solute than its solubility
- C) Cannot dissolve any more solute
- D) Saturated solution at low temperature

14. Which law explains the depression in vapor pressure of a solution?

- A) Raoult's Law
- B) Boyle's Law
- C) Henry's Law
- D) Dalton's Law

15. Which of the following mixtures is homogeneous?

- A) Sand and water
- B) Oil and water
- C) Air
- D) Soil

16. Which term describes the amount of solute required to form a saturated solution in a given amount of solvent at a certain temperature?

- A) Molarity
- B) Solubility
- C) Concentration
- D) Density

17. The process of adding more solvent to a solution to decrease its concentration is called:

- A) Dilution

- B) Saturation
- C) Neutralization
- D) Sublimation

18. Which solution shows Tyndall effect?

- A) True solution
- B) Colloidal solution
- C) Supersaturated solution
- D) Saturated solution

19. Which of the following is an example of a liquid-liquid solution?

- A) Salt in water
- B) Sugar in tea
- C) Alcohol in water
- D) Air

20. Which of the following has the highest boiling point?

- A) Pure water
- B) 0.1 M NaCl
- C) 0.1 M glucose
- D) 0.1 M CaCl₂

ANSWERS-1.(C) 2.(A) 3.(B) 4.(D) 5.(C) 6.(B) 7.(A) 8.(A) 9.(A) 10.(B) 11.(B) 12.(B) 13.(A)

14.(A) 15.(C) 16.(B) 17.(A) 18.(B) 19.(C) 20.(D)