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GLOBAL SUPER-40
MEDICAL/ENGINEERING/FOUNDATION

For
NEET 2025

Topic & **Chapter** **Wise**

Classroom Discussion

NEET
CHEMISTRY
CLASS XI & XII

HOME ASSIGNMENTS CHAPTERWISE - CHEMISTRY

Scoring Grid				
Total Questions	45	Total Marks	180
Attempted		Correct	
Incorrect		Net Score	
Cut-off Score	45	Qualifying Score	60
Success Gap = Net Score – Qualifying Score				
Net Score = (Correct × 4) – (Incorrect × 1)				

Contents

Contents
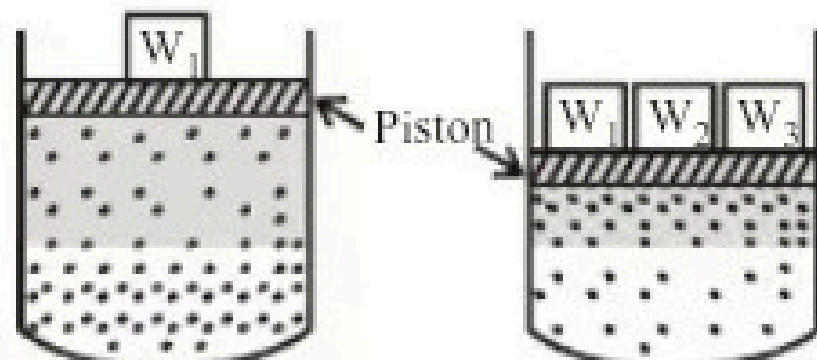
CHEMISTRY

FACT/DEFINITION TYPE QUESTIONS

1. "The importance of many pure substance in life depends on their composition."
    Which of the following statement justify the above fact?
    (a) 1 ppm of fluoride ions in water prevents tooth decay.
    (b) 1.5 ppm of fluoride ions causes tooth decay.
    (c) Concentration above 1.5 ppm can be poisonous.
    (d) All of the above.

2. Which of the following fluoride is used as rat poison?
    (a) CaF_2 (b) KF
    (c) NaF   (d) MgF_2

3. Most of the processes in our body occur in
    (a) solid solution   (b) liquid solution
    (c) gaseous solution   (d) colloidal solution

4. The term homogenous mixtures signifies that
    (a) its composition is uniform throughout the mixture.
    (b) its properties are uniform throughout the mixture.
    (c) both composition and properties are uniform throughout the mixture.
    (d) neither composition nor properties are uniform throughout the mixture.

5. Which of the following mixture is(are) called solution?
    (i) water + ammonia   (ii) water + acetone
    (iii) acetone + alcohol   (iv) hexane + water
    (a) (i), (ii) and (iii)   (b) (i), (iii) and (iv)
    (c) (i) and (iv)   (d) (ii) and (iii)

6. Which of the following is a quantitative description of the solution?
    (a) Dilute   (b) Concentrated
    (c) Saturated   (d) Molar

7. When a 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

8. Molarity of liquid HCl will be, if density of solution is 1.17 gm/cc
    (a) 36.5   (b) 32.05
    (c) 18.25   (d) 42.10

9. 1 M, 2.5 litre NaOH solution is mixed with another 0.5 M, 3 litre NaOH solution. Then find out the molarity of resultant solution
    (a) 0.80 M   (b) 1.0 M
    (c) 0.73 M   (d) 0.50 M

10. An X molal solution of a compound in benzene has mole fraction of solute equal to 0.2. The value of X is
    (a) 14   (b) 3.2
    (c) 1.4   (d) 2

11. The molarity of the solution containing 7.1 g of Na_2SO_4 in 100 ml of aqueous solution is
    (a) 2 M   (b) 0.5 M
    (c) 1 M   (d) 0.05 M

12. The vapour pressure of pure benzene at 25°C is 640 mm Hg and that of solution of solute A is 630 mm Hg. The molality of solution is
    (a) 0.2 m   (b) 0.4 m
    (c) 0.5 m   (d) 0.1 m

13. 4.0 g of NaOH is dissolved in 100 ml solution. The normality of the solution is
    (a) 0.1 N   (b) 0.5 N
    (c) 4.0 N   (d) 1.0 N

14. The molarity of pure water is
    (a) 50 M   (b) 18 M
    (c) 55.6 M   (d) 100 M

15. An aqueous solution of glucose is 10% in strength. The volume in which 1 g mole of it is dissolved, will be
    (a) 9 litre   (b) 1.8 litre
    (c) 8 litre   (d) 0.9 litre

16. 10 g of NaCl is dissolved in 10^6 g of the solution. Its concentration is
    (a) 100 ppm   (b) 0.1 ppm
    (c) 1 ppm   (d) 10 ppm

17. On adding a solute to a solvent having vapour pressure 0.80 atm, vapour pressure reduces to 0.60 atm. Mole fraction of solute is
    (a) 0.25   (b) 0.75
    (c) 0.50   (d) 0.33

18. 2.5 litres of NaCl solution contain 5 moles of the solute. What is the molarity?
    - (a) 5 molar
    - (b) 2 molar
    - (c) 2.5 molar
    - (d) 12.5 molar

19. The mole fraction of the solute in one molal aqueous solution i
    - (a) 0.009
    - (b) 0.018
    - (c) 0.027
    - (d) 0.036

20. 5 ml of N HCl, 20 ml of N/2 H_2SO_4 and 30 ml of N/3 HNO_3 are mixed together and volume made to one litre. The normality of the resulting solution is
    - (a) $\dfrac{N}{5}$
    - (b) $\dfrac{N}{10}$
    - (c) $\dfrac{N}{20}$
    - (d) $\dfrac{N}{40}$

21. 25ml of a solution of barium hydroxide on titration with a 0.1 molar solution of hydrochloric acid gave a titre value of 35 ml. The molarity of barium hydroxide solution was
    - (a) 0.07
    - (b) 0.14
    - (c) 0.28
    - (d) 0.35

22. Mole fraction of the solute in a 1.00 molal aqueous solution is
    - (a) 0.1770
    - (b) 0.0177
    - (c) 0.0344
    - (d) 1.7700

23. What is the normality of a 1 M solution of H_3PO_4?
    - (a) 0.5 N
    - (b) 1.0 N
    - (c) 2.0 N
    - (d) 3.0 N

24. The volume of 4 N HCl and 10 N HCl required to make 1 litre of 6 N HCl are
    - (a) 0.75 litre of 10 N HCl and 0.25 litre of 4 N HCl
    - (b) 0.50 litre of 4 N HCl and 0.50 litre of 10 N HCl
    - (c) 0.67 litre of 4 N HCl and 0.33 litre of 10 N HCl
    - (d) 0.80 litre of 4 N HCl and 0.20 litre of 10 N HCl

25. Molarity of H_2SO_4 is 18 M. Its density is 1.8 g/ml. Hence molality is
    - (a) 36
    - (b) 200
    - (c) 500
    - (d) 18

26. 200 ml of water is added to 500 ml of 0.2 M solution. What is the molarity of this diluted solution?
    - (a) 0.5010 M
    - (b) 0.2897 M
    - (c) 0.7093 M
    - (d) 0.1428 M

27. How many grams of concentrated nitric acid solution should be used to prepare 250 mL of 2.0 M HNO_3? The concentrated acid is 70% HNO_3
    - (a) 90.0 g conc. HNO_3
    - (b) 70.0 g conc. HNO_3
    - (c) 54.0 g conc. HNO_3
    - (d) 45.0 g conc. HNO_3

28. For preparing 0.1 N solution of a compound from its impure sample of which the percentage purity is known, the weight of the substance required will be
    - (a) Less than the theoretical weight
    - (b) More than the theoretical weight
    - (c) Same as the theoretical weight
    - (d) None of these

29. If $\dfrac{N}{10}$ 50 ml H_2SO_4, $\dfrac{N}{3}$ 30 ml HNO_3, $\dfrac{N}{2}$ 10 ml HCl is mixed and solution is made to 1L. Then normality of resultant solution is
    - (a) $\dfrac{N}{20}$
    - (b) $\dfrac{N}{40}$
    - (c) $\dfrac{N}{50}$
    - (d) N

30. A solution made by dissolving 40 g NaOH in 1000 g of water is
    - (a) 1 molar
    - (b) 1 normal
    - (c) 1 molal
    - (d) None of these

31. Which of the following concentration terms is/are independent of temperature?
    - (a) Molality only
    - (b) Molality and mole fraction
    - (c) Molarity and mole fraction
    - (d) Molality and normality

32. A solution is prepared by dissolving 10 g NaOH in 1250 mL of a solvent of density 0.8 mL/g. The molality of the solution in mol kg^{-1} is
    - (a) 0.25
    - (b) 0.2
    - (c) 0.008
    - (d) 0.0064

33. Which of the following units is useful in relating concentration of solution with its vapour pressure?
    - (a) mole fraction
    - (b) parts per million
    - (c) mass percentage
    - (d) molality

34. For mixture containing "four" components which of the following is correct in term of mole fraction?
    - (a) $x_1 + x_2 + x_3 + x_4 \neq 1$
    - (b) $\dfrac{n_3}{n_1 + n_2 + n_3} = x_3$
    - (c) $x_1 = \dfrac{n_1}{n_1 + n_2 + n_3 + n_4} = \dfrac{n_1}{\Sigma n}$
    - (d) $n_1 + n_2 + n_3 + n_4 = 1$

35. Which of the following concentration unit is independent of temperature?
    - (a) Normality
    - (b) Molarity
    - (c) Formality
    - (d) Molality

36. Which of the following factor do not affect solubility of solid solute in liquid?
    - (a) Temperature
    - (b) Pressure
    - (c) Nature of solute
    - (d) All of these

37. When a solid solute is added to the solvent, some solute dissolves and its concentration increases in solution. This process is known as _____. Some solute particles in solution collide with the solid solute particles and get separated out of solution. This process is known as _____.
    - (a) Crystallization, dissolution.
    - (b) Dissolution, saturation.
    - (c) Saturation, crystallization.
    - (d) Dissolution, crystallization.

38. At the state of dynamic equilibrium, for solute + solvent ⇌ solution.
  (a) Rate of dissolution = Rate of unsaturation.
  (b) Rate of dissolution = Rate of unsaturation.
  (c) Rate of dissolution = Rate of saturation
  (d) Rate of crystallization = Rate of saturation.

39. Which of the following statements is incorrect?
  (a) A solution in which no more solute can be dissolved at the same temperature and pressure is called a saturated solution.
  (b) An unsaturated solution is one in which more solute can be dissolved at the same temperature.
  (c) The solution which is in dynamic equilibrium with undissolved solute is the saturated solution.
  (d) The minimum amount of solute dissolved in a given amount of solvent is its solubility.

40. On dissolving sugar in water at room temperature solution feels cool to touch. Under which of the following cases dissolution of sugar will be most rapid ?
  (a) Sugar crystals in cold water.
  (b) Sugar crystals in hot water.
  (c) Powdered sugar in cold water.
  (d) Powdered sugar in hot water.

41. The solubility of a solid in a liquid is significantly affected by temperature changes.

  Solute + Solvent ⇌ Solution.

  The system being in a dynamic equilibrium must follow Le-chatelier's principle. Considering the Le-chatelier's principle which of the following is correct?
  (a) $\Delta H_{sol} > 0$; solubility ↑ ; temperature ↓
  (b) $\Delta H_{sol} < 0$; solubility ↓ ; temperature ↑
  (c) $\Delta H_{sol} > 0$; solubility ↓ ; temperature ↑
  (d) $\Delta H_{sol} < 0$; solubility ↑ ;   temperature ↑

42.

On the basis of the figure given above which of the following is not true?
  (a) In figure (a) assuming the state of dynamic equilibrium rate of gaseous particles entering and leaving the solution phase is same.
  (b) In figure (b) on compressing the gas number of gaseous particles per unit volume over the solution increases.
  (c) Rate at which gaseous particles are striking the solution to enter it, decreases.
  (d) Rate at which gaseous particles are striking the solution to enter it, increases.

43. The statement "If 0.003 moles of a gas are dissolved in 900 g of water under a pressure of 1 atmosphere, 0.006 moles will be dissolved under a pressure of 2 atmospheres", illustrates
  (a) Dalton's law of partial pressure
  (b) Graham's law
  (c) Raoult's law
  (d) Henry's law

44. According to Henry's law, the amount of gas that will dissolve in blood plasma or any other liquid is determined by which of these factor?
  (a) Solubility of the gas in the liquid.
  (b) The total pressure of the gas mixture .
  (c) pH of the liquid.
  (d) The osmotic pressure of the gas mixture.

45. Henry's law constant of oxygen is 1.4×10^{-3} mol. lit^{-1}. atm^{-1} at 298 K. How much of oxygen is dissolved in 100 ml at 298 K when the partial pressure of oxygen is 0.5 atm?
  (a) 1.4 g   (b) 3.2 g
  (c) 22.4 mg   (d) 2.24 mg