CHEMISTRY CLASS 12 BATCH

SOLUTIONS

DPP-01

1. Which of the following is not a binary solution?
   (A) Pure Water + Sugar
   (B) Air
   (C) Mixture of benzene and toulene
   (D) Mixture of ethanol and methanol

2. If sea water is assumed to contain 40g of salt per 200g of sea water then percentage by mass of salt present is
   (A)15 % (B) 40 %
   (C)20 % (D) 10 %

3. If 2 moles of $CaCO_3$ is dissolved in 900g of water then percentage by mass of solution formed is
   (A) 36.36 % (B) 9.9%
   (C) 18.18 % (D) 11.75 %

4. 0.5 moles of benzene was dissolved in 2 moles of toluene. Find mass % of benzene in the solution formed
   (A) 25.48 % (B) 9.52%
   (C) 15.92 % (D) 17.48 %

5. 60 ml of liquid A is mixed with another liquid B and the solution was made upto 300 ml. Find volume % of liquid B in the solution formed
   (A) 40% (B) 60%
   (C) 20% (D) 80%

6. How much solute should be dissolved in 20 ml of solution so that mass by volume % of solute is 30?
   (A) 6g (B) 4g
   (C) 8g (D) 10g

7. Calculate the mass of cane sugar required to prepare 250 g of 25% cane sugar solution with water.
   (A) 6.25 g (B) 187.5 g
   (C) 18.75 g (D) 62.5 g

8. Find mass by mass % of a solution of 20 ml volume having solute of mass 4g.
   (density of solution = 1.4 g/ml)

9. What is the concentration of mercury in ppm if 3g mercury is found in 15kg sample of ocean water?
   (A) 300 (B) 400
   (C) 500 (D) 200

10. A tank contains 5 moles of oxygen, 2 moles of nitrogen and 20g of hydrogen at room temperature. Find the mole fraction of hydrogen.
    (A) 5/17 (B) 2/15
    (C) 8/15 (D) 10/17

11. An aqueous solution of ethanol contains 23g of ethanol dissolved in 90g of water. Find mole fraction of ethanol in the solution.
    (A) 3/4 (B) 3/5
    (C) 2/7 (D) 1/11

12. Find molarity of a sample of pure water. Consider density = 1 g/ml.
    (A) 27.7 (B) 33.3
    (C) 55.5 (D) 11.1

13. A solution contains 50g of CaCO3 dissolved in 3 liters of water. Find the molarity of the solution formed.
    (A) 1/2 (B) 1/3
    (C) 1/6 (D) 1/4

14. What is the molality of a solution containing 2 moles of a solute dissolved in 500g of a solvent?
    (A) 3 (B) 2
    (C) 1 (D) 4

15. An aqueous solution of glucose is prepared by dissolving 45 g of glucose in 1 liter of water. Find molality of solution formed.
    (A) 1/4 (B) 3/5
    (C) 1/3 (D) 2/3