Yakeen NEET 2.0 (Legend)

Mole Concept

DPP-07

1. A compound (80 g) on analysis gave C = 24 g, H = 4 g, O = 32 g. Its empirical formula is: (Gram atomic mass of C = 12 g, H = 1 g and O = 16 g)
(1) $C_2H_2O_2$ (2) C_2H_2O
(3) CH_2O_2 (4) CH_2O

2. An organic compound containing C, H and N gave the following analysis C = 40%, H = 13.33%, N = 46.67%. Its empirical formula would be: (Gram atomic mass of C = 12 g, H = 1 g and N = 14 g)
(1) CH_4N (2) CH_5N
(3) $C_2H_7N_2$ (4) C_2H_7N

3. 8 g NaOH is dissolved in one litre of solution, its molarity is: (Gram molecular mass of NaOH = 40 g)
(1) 0.8 M (2) 0.4 M
(3) 0.2 M (4) 0.1 M

4. The molarity of a solution of sodium chloride (mole wt. = 58.5) in water contain 5.85 g of sodium chloride in 500 ml of solution is:
(1) 0.25 (2) 2.0
(3) 1.0 (4) 0.2

5. What volume of a 0.8 M solution contains 100 millimoles of the solute?
(1) 100 mL (2) 125 mL
(3) 500 mL (4) 62.5 mL

6. The molality of a sulphuric acid solution is 0.2. Calculate the total weight of the solution having 1000 g of solvent. (Gram Molecular mass of H_2SO_4 = 98 g)
(1) 1000 g (2) 1098.6 g
(3) 980.4 g (4) 1019.6g

7. The amount of anhydrous Na_2CO_3 present in 250 ml of 0.25 M solution is: (Gram molecular mass of Na_2CO_3 = 106 g)
(1) 6.225 g (2) 66.25 g
(3) 6.0 g (4) 6.625 g

8. The number of moles of solute per kg of a solvent is called its:
(1) Molarity
(2) Normality
(3) Molar fraction
(4) Molality

9. When W_B gram solute (molecular mass M_B) dissolves in W_A gram solvent. The molality M of the solution is:
(1) $\frac{W_B}{W_A}\times\frac{M_B}{1000}$ (2) $\frac{W_B}{M_B}\times\frac{1000}{W_A}$
(3) $\frac{W_A}{W_B}\times\frac{1000}{M_B}$ (4) $\frac{W_A\times M_B}{W_B\times 1000}$

10. The molarity of the solution containing 2.8% mass-volume solution of KOH is: (Gram molecular mass = 56 g)
(1) M/10 (2) M/2
(3) M/5 (4) 1 M

11. What is the quantity of water that should be added to 16 g methanol to make the mole fraction of methanol as 0.25? (Gram molecular mass of CH_3OH(methanol) = 32 g and H_2O = 18 g)
(1) 27 g (2) 12 g
(3) 18 g (4) 36 g

Note: Kindly find the Video Solution of DPPs Questions in the DPPs Section.

Answer Key

1.	**(4)**
2.	**(1)**
3.	**(3)**
4.	**(4)**
5.	**(2)**
6.	**(4)**
7.	**(4)**
8.	**(4)**
9.	**(2)**
10.	**(2)**
11.	**(1)**

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