



Class 11 Chemistry | Some Basic Concepts Of Chemistry

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

1. How many moles are present in 13.2 g CO₂? (M = 44 g mol⁻¹)

A. 0.60 B. 0.15 C. 0.30 D. 3.0

2. How many oxygen atoms are present in 0.25 mol CO₂?

A. 0.50 N_a B. 1.00 N_a C. 0.25 N_a D. 0.75 N_a

3. What is the mass of 0.20 mol NaOH? (M = 40 g mol⁻¹)

A. 2 g B. 20 g C. 8 g D. 80 g

4. A compound has empirical formula CH₂ and molar mass 56. Its molecular formula is:

A. C₄H₁₀ B. C₄H₈ C. C₂H₄ D. C₃H₆

5. What is the molarity of 0.050 mol solute in 250 mL solution?

A. 2.0 M B. 0.0125 M C. 0.20 M D. 0.50 M

6. 100 mL of 0.60 M solution is diluted to 300 mL. New molarity is:

A. 0.020 M B. 0.60 M C. 1.80 M D. 0.20 M

7. For N₂ + 3H₂ → 2NH₃, 2 mol N₂ and 3 mol H₂ give at most:

A. 3 mol NH₃ B. 1 mol NH₃
C. 2 mol NH₃ D. 4 mol NH₃

8. Mass percentage of oxygen in H₂O is approximately:

A. 50.0% B. 66.7% C. 88.9% D. 11.1%

9. How many significant figures are in 0.00450?

A. 4 B. 5 C. 3 D. 2

10. Correctly reported sum of 12.11 g and 0.3 g is:

A. 12.410 g B. 12.4 g C. 12.41 g D. 12 g

11. The mole fraction of A in 2 mol A mixed with 3 mol B is:

A. 0.67 B. 1.50 C. 0.60 D. 0.40

12. A 10 g solute is dissolved in 90 g water. Mass percentage is:

A. 9% B. 11.1% C. 90% D. 10%

13. Which sample contains the most molecules?

A. 44 g CO₂ B. 28 g N₂ C. 8 g H₂ D. 16 g O₂

14. A sample has 24 g C and 4 g H. Its empirical formula is:

A. CH₄ B. C₂H C. C₂H₃ D. CH₂

15. The same mass of C combines with 16 g and 32 g O in two oxides. This illustrates:

A. Conservation of volume
B. Reciprocal proportions only
C. Constant gas pressure
D. Multiple proportions

ANSWER KEY — check after completing all 15 questions

1.C 2.A 3.C 4.B 5.C 6.D 7.C 8.C 9.C 10.B 11.D 12.D 13.C 14.D 15.D