Multiple Choice Questions  Unit (5)  Chem-100

1. A solution is made by dissolving some salt in a beaker of water. The salt is referred to as the
A. solute  B. filtrate  C. solution  D. solvent

2. When KCl dissolves in water, the following will be produced.
A. K and Cl  B. K⁺ and Cl⁻  C. K and Cl₂  D. K⁺ and Cl₂

3. What is the concentration, in % (m/v) of a solution containing 15.0 g KCl in 600.0 mL solution?
A. 5.00%  B. 2.00%  C. 0.200%  D. 2.50%

4. A 5.00 mL sample of solution has 2.8 x 10⁻⁴ g of calcium ions. The ppm concentration is
A. 18 ppm  B. 56 ppm  C. 2.8 x 10⁻¹ ppm  D. 2.8 x 10² ppm

5. How many mL of 2.50% (m/v) salt solution would contain 1.80 g of salt?
A. 105 mL  B. 104 mL  C. 45.0 mL  D. 72.0 mL

6. What is the molarity of a solution that contains 1.50 mol HCl in 2.50 L of solution?
A. 1.67 M  B. 0.600 M  C. 1.20 M  D. 1.40 M

7. How many moles of C₁₂H₂₂O₁₁ are needed to prepare 2.50 L of 0.300 M solution?
A. 0.750 mol  B. 0.430 mol  C. 8.33 mol  D. 1.20 mol

8. What is the molarity of a NaNO₃ solution made by diluting 250.0 mL of a 1.60 M solution to a final volume of 400. mL?
A. 1.20 M  B. 1.00 M  C. 0.200 M  D. 0.160 M

9. In the process known as osmosis, __________ moves through a semi-permeable membrane into an area of lower __________ concentration.
A. water, water  B. solute, solute  C. water, solute  D. solute, water

10. What is the osmolarity of 0.800M (NH₄)₃PO₄ solution?
A. 3.20 osmol  B. 2.40 osmol  C. 1.60 osmol  D. 8.00 osmol
Answers

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