Thebes El Maadi International School
Science Department
Chemistry 2020/2021
Quarter 2 Exams- Revision Sheet- Paper 4- Ions in aqueous solutions

Q2) Completion

1. An ion that does not take part in a chemical reaction is called a(n)_____.
   A. inspector ion B. spectator ion

2. The number of moles of ions produced by the dissociation of 1 mol. of $MgCl_2$ is_____.c
   A. 1 mol. B. 2 moles. C. 3 moles. D. 4 moles.

3. The symbol for the hydronium ion is_____.
   A. HO^+ B. H_2O^+ C. H_3O^+ D. H_3O^{++}

4. The ions Ca^{2+} (aq) and NO^{3-} (aq) are produced by the dissociation of the compound whose formula is_____.
   A. $Ca(NO_3)$ B. $Ca(NO_3)_2$ C. $Ca_2(NO_3)_2$ D. $Ca_2(NO_3)$

5. The right-hand side of the equation for the dissolving of K_2S is_____ .
   A. K^+ (aq) + S^{2-} (aq). B. K^+ (aq) + $2S^{2-}$ (aq).
   C. $2K^+$ (aq) + $2S^{2-}$ (aq). D. $2K^+$ (aq) + S^{2-} (aq).

6. When a solid is formed from the combination of two solutions of ionic compounds, it is called_____.
   A. precipitation B. combination C. displacement D. formation

7. Any substance whose water solution conducts electricity is a(n) _____ .
   A. electrolyte B. nonelectrolyte C. precipitate D. molecular

8. The vapor pressure of pure water is_____the vapor pressure for an aqueous solution.
   A. greater than B. less than C. equal to

9. The boiling point for a 1 M solution of glucose (a nonelectrolyte) will be _____for a 1 M solution of NaCl (a strong electrolyte).
   A. higher than B. lower than C. equal

Q3) Short Answer

10. Explain how ionization and dissociation differ.

A. Ionization is the process of forming ions from the solute molecules by the action of the solvent. Dissociation is the separation of ions that occurs when an ionic compound dissolves.

B. Dissociation is the process of forming ions from the solute molecules by the action of the solvent. Ionization is the separation of ions that occurs when an ionic compound dissolves.

11. Distinguish between the dissolution of a strong electrolyte and that of a weak electrolyte.
    A. In a weak electrolyte, all or almost all the dissolved compound exists as ions in aqueous solution. In a strong electrolyte, little of the dissolved compound exists as ions in aqueous solution
    B. In a strong electrolyte, all or almost all the dissolved compound exists as ions in aqueous solution. In a weak electrolyte, little of the dissolved compound exists as ions in aqueous solution

12. Why is the hydronium ion used to represent the hydrogen ion in a solution?

    A. In water, the H^+ ion immediately bonds to a water molecule, forming a hydronium ion, H_3O^+.
    B. In water, the water molecules dissociate to give H^+

13. Explain why salt is frequently poured on icy roads in the winter.

    A. Dissolved salt will raise the freezing point of water.
    B. Dissolved salt will lower the freezing point of water.
    C. Dissolved salt will keep the freezing point of water.
    D. Dissolved salt will keep friction with the ice.

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