

CHEMISTRY (CLASS – X)

Chapter 1: Chemical Reactions and Equations

Questions:

1. A magnesium ribbon is burnt in oxygen to give a white compound 'X', accompanied by emission of light. If the burning ribbon is now placed in an atmosphere of nitrogen, it continues to burn and forms a compound 'Y'.
 - i) Write the chemical formula of 'X' and 'Y'.
 - ii) Write a balanced chemical equation when 'X' is dissolved in water?

 2. To demonstrate the double displacement reaction, the solutions of lead(II)nitrate and potassium iodide are mixed.
 - i) What is the colour of the precipitate formed? Name the compound precipitated.
 - ii) Write the balanced chemical equation of this reaction.

 3. A student has been collecting silver coins and copper coins. After some days when she took out the coins to count, she found a black coat on silver coins and green coat on copper coins.
 - i) Which chemical phenomenon is responsible for such coatings?
 - ii) write the chemical reactions involved.

 4. Identify the substances oxidized, reduced, oxidizing agent and reducing agent in the following reactions:
 - i) $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$
 - ii) $\text{CuSO}_4 + \text{Zn} \rightarrow \text{ZnSO}_4 + \text{Cu}$
 - iii) $\text{CuO} + \text{H}_2 \rightarrow \text{Cu} + \text{H}_2\text{O}$
 - iv) $\text{Fe} + 2\text{HCl} \rightarrow \text{FeCl}_2 + \text{H}_2$

 5. A solution of substance 'X' is used for white washing. What is the substance 'X'? State the chemical reaction of 'X' with water.

 6. Why does the colour of copper sulphate solution changes when iron nail is dipped in it?

 7. Explain the following terms with an example each:
 - i) Corrosion
 - ii) Rancidity

 8. Write the balanced chemical equations with the state symbols for the given word equations:
 - i) Calcium hydroxide + Carbondioxide \longrightarrow Calcium carbonate + Water
 - ii) Zinc + Silver nitrate \longrightarrow Zinc nitrate + Silver
 - iii) Aluminium + Copper(II)chloride \longrightarrow Aluminium chloride + Copper
 - iv) Barium chloride + Sodium sulphite \longrightarrow Barium sulphite + Sodium chloride

 9. Why are decomposition reaction called the opposite of combination reaction? Write the equation of these reaction.

 10. What do you mean by precipitation reaction? Explain giving example.
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