

Board – CBSE

Class – 10

Topic – Chemical Reactions & Equations

1. Give 5 examples each of physical and chemical changes that take place around us in our day to day life.
2. When a magnesium ribbon is burnt in air, what are the two observations that you make?
3. Write a balanced chemical equation to represent decomposition of lead nitrate on heating. What are brown fumes due to?
4. Make a list of at least 10 cations and 10 anions.
5. Taking help from the list prepared in Q4, write the chemical formulae of:-
 - (i) Barium chloride
 - (ii) Sodium sulphate
 - (iii) Ammonium phosphate
 - (iv) Calcium hydroxide
 - (v) Aluminium carbonate
 - (vi) Magnesium hydrogen carbonate
 - (vii) Zinc sulphide
 - (viii) Copper (I) chloride
 - (ix) Potassium Bromide
 - (x) Lead nitrate
 - (xi) Iron (III) oxide
 - (xii) Sodium Oxide
 - (xiii) Silver sulphide
 - (xiv) Calcium Fluoride
6. Write the following in the form of balanced chemical equations:-
 - (a) Calcium carbonate decomposes on heating to form calcium oxide and carbon – di – oxide.
 - (b) When ammonium hydroxide is added to a solution of iron (II) Sulphate, a green ppt of iron (II) hydroxide and ammonium sulphate are formed.
 - (c) When a nail of iron is added to a solution of copper sulphate, iron (II) sulphate and copper metal are formed.
 - (d) Zinc reacts with dil. hydrochloric acid to form zinc chloride and hydrogen gas is liberated.
7. A chemical reaction which is both combination as well as exothermic, is used by us for white washing purposes. Write the equation for the same.

8. What is a decomposition reaction? Give 2 examples each of decomposition taking place due to heat, light and electricity.
9. How does a displacement reaction differ from a double displacement reaction? Give examples to explain.
10. Identify the type of reactions:-
 - (a) $4\text{Na} + \text{O}_2 \rightarrow 2\text{Na}_2\text{O}$
 - (b) $\text{Cu} + 2\text{AgNO}_3 \rightarrow \text{Cu}(\text{NO}_3)_2 + 2\text{Ag}$
 - (c) $\text{FeSO}_4 \xrightarrow{\Delta} \text{Fe}_2\text{O}_3 + \text{SO}_2 + \text{SO}_3$
 - (d) $\text{AgNO}_3 + \text{NaCl} \rightarrow \text{AgCl} + \text{NaNO}_3$
 - (e) $\text{CaO} + \text{CO}_2 \rightarrow \text{CaCO}_3$
11. Describe an activity that can be performed to obtain silver in its free state from silver chloride.
12. Find out the process of oxidation, reduction oxidizing agent, reducing agent from the following: -
 - (a) $\text{MnO}_2 + 4\text{HCl} \rightarrow \text{MnCl}_2 + 2\text{H}_2\text{O} + \text{Cl}_2$
 - (b) $\text{H}_2\text{S} + \text{SO}_2 \rightarrow \text{S} + \text{H}_2\text{O}$
 - (c) $\text{CuO} + \text{C} \rightarrow \text{Cu} + \text{CO}$
13. Name the compounds formed when Fe, Cu, Ag and Al get corroded.
14. What is rancidity?
15. Give 2 measures each for the prevention of:-
 - (a) Rusting of iron
 - (b) rancidity of fats/oils