

MAHESH PUBLIC SCHOOL, JODHPUR

REVISION NOTES - 1

CLASS X

Subject : SCIENCE

Chapter : Chemical Reactions and Equations

- 1. Chemical reactions-** The transformation of chemical substance into a new chemical substance by making and breaking of bonds between different atoms is known as Chemical Reaction.
- 2. Signs of a chemical reaction-** These factors denote that a chemical reaction has taken place- change of state of substance, change of color of substance, evolution of heat, absorption of heat, evolution of gas and evolution of light.
- 3. Chemical Equation:** The representation of chemical reaction by means of symbols of substances in the form of formulae is called chemical equation. E.g. - $\text{H}_2 + \text{O}_2 \Rightarrow \text{H}_2\text{O}$
- 4. Balanced Chemical Equation:** A balanced chemical equation has number atoms of each element equal on both left and right sides of the reaction.

*Note- According to Law of Conservation of Mass, mass can neither be created nor destroyed in a chemical reaction. To obey this law, the total mass of elements present in reactants must be equal to the total mass of elements present in products.

5. Types of Chemical Reactions-

I. Combination- When two elements or one element and one compound or two compounds combines to give one single product.

II. Decomposition- Splitting of a compound into two or more simple products.

III. Displacement- It takes place when a more reactive metal displaces a less reactive metal.

IV. Double displacement- Reactions in which ions are exchanged between two reactants forming new compounds are called double displacement reactions.

V. Precipitation- The insoluble compound called precipitate forms in this reaction.

VI. Exothermic- Reactions which produce energy are called exothermic reaction. Most of the decomposition reactions are exothermic.

VII. Endothermic- Reactions which absorb energy are called endothermic reaction. Most of the combination reactions are endothermic.

VIII. Oxidation: Gain of oxygen or removal of hydrogen or metallic element from a compound is known as oxidation.

IX. Reduction: Addition of hydrogen or removal of oxygen from a compound is called reduction.

X. Redox- A chemical reactions where oxidation and reduction both take place simultaneously are also known as redox reaction.



6. Rusting- When iron reacts with oxygen and moisture forms a red substance called rust.

7. Rancidity- Oils and fats when get oxidized on exposure to air show a change in taste and smell.

8. Corrosion- Metals when attacked by oxygen, water, acids, gases, present in air changes its surface which is called corrosion.