Chemical Reaction

Whenever a chemical change occurs we can say that
a chemical reaction has taken place

eg 1. Food gets digested in our body
2. Rusting of iron.

Balancing Equation

We balance the chemical equation so that no. of
atoms of each element involved in the reaction remain same at the reactant and product side.

eg Fe + H_2O → Fe_2O_3+ H_2
can be written as
3 Fe(s) + 4H_2O(g) → Fe_2O_3(s) +4H_2(g)

Combination Reaction

The reaction in which two or more substances
combine to form a new single substance

eg CaO(s) + H_2O(l) ——→ Ca(OH)2 (aq)
Calcium Water Calcium hydroxide oxide (slaked lime)

Displacement Reaction

The chemical Reaction in which an element displaces another element from its solution

Oxidation

Oxidation is the gain of oxygen or loss of hydrogen

Exothermic Reactions

Reaction in which heat is released along with the
formation of products

– Respiration is also exothermic reaction.
– Decomposition of vegetable matter into compost.

Decompositon Reactions

The reaction in which a single substance decomposes to give two or more substances.

Double Displacement Reaction

The reaction in which two different atoms or group of atoms are mutually exchanged

Precipitation Reaction

Any reaction that produces a precipitate is called a precipitation reaction.

Reduction

Reduction is the loss of oxygen or gain of hydrogen.

Chemical Equation

A chemical reaction can be expressed symbolically
by using chemical equation
eg: magnesium is burnt into air to form magnesium oxide can be represented as
Mg + O_2 → MgO

– We can observe or recognise a chemical reaction by observing change
in state, colour, by evolution of gas or by change in temperature.
Physical state of the reactant and products are mentioned to make chemical
reaction more informative. eg: we use (g) for gas, (l) for liquid, (s) for solid
and (aq) for aqueous.

Endothermic Reactions

The reactions which require energy in the form of heat, light or electricty are called Endothermic Reactions

2Ba(OH)2+ NH_4Cl ——→ 2$BaCl_2$+ NH_4OH

Redox Reaction

The reaction in which one reactant gets oxidised while other gets reduced

Corrosion

When a metal is attacked by substances around it such as moisture, acids etc.

eg. Reddish brown coating on iron.
(ii) Black coating on Silver

Rancidity

When fats and oils are oxidised they become rancid and their smell and taste change.

Antioxidants are added to foods containing fats and oil.