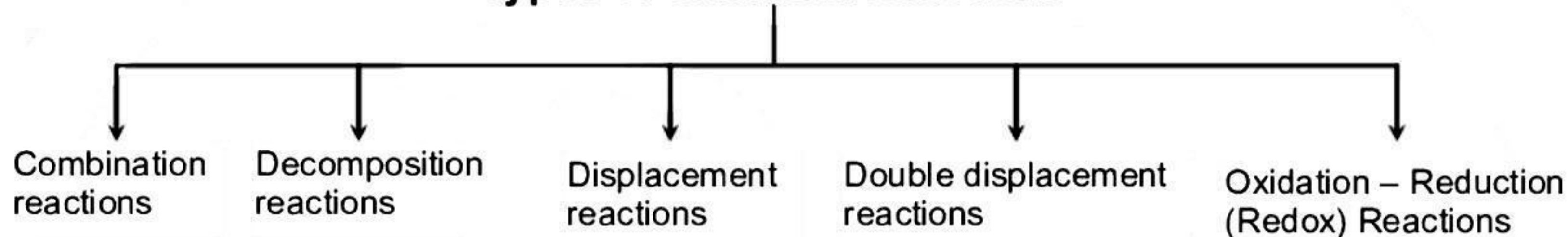


CHEMICAL REACTIONS AND EQUATIONS

DIFFERENCE BETWEEN PHYSICAL CHANGE AND CHEMICAL CHANGE

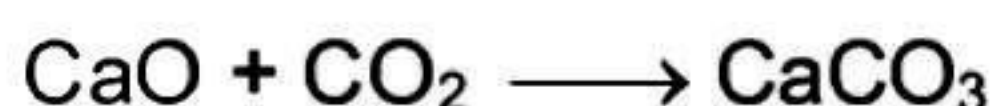
Physical Change	Chemical Change
(i) Those changes in which no new substances are formed are called physical changes	(i) Those changes in which the original substances lose their chemical nature and identity and form new chemical substances with different properties are called chemical changes
(ii) It is a temporary change	(ii) It is a permanent change
(iii) It is easily reversible	(iii) It is usually irreversible
(iv) In a physical change the mass of substance does not alter	(iv) In a chemical change the mass of the substance does alter

Types of Chemical Reactions



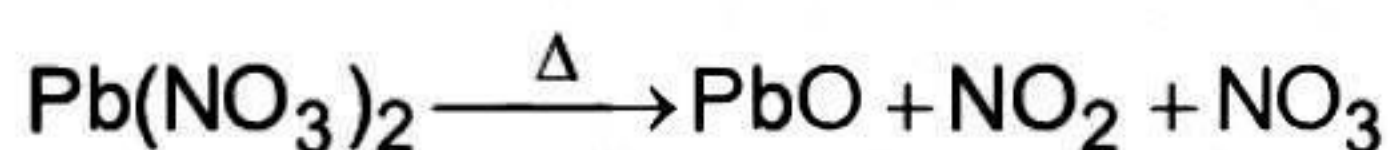
Types of Chemical Reactions:

(i) **Addition or combination reaction:** Two or more substances combine to form a single substance.

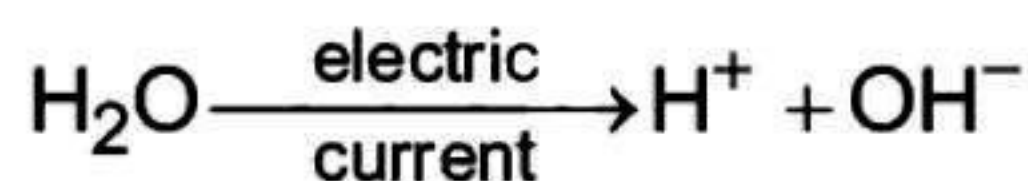


(ii) **Decomposition reaction:** One chemical substance splits to give two or more substances either by heat energy (Thermolysis) or light (Photolysis) or by electricity (Electrolysis).

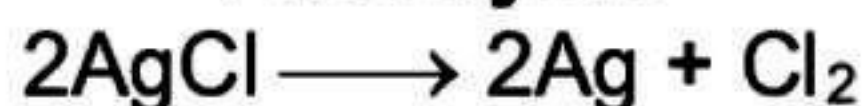
Thermolysis



Electrolysis



Photolysis



(iii) **Displacement Reaction:** More reactive element displaces less reactive element from its compound or salt.



(iv) **Double Displacement Reaction:** Two elements interchange their respective salts or ions to form new compounds.



(v)

(a) Oxidation	(b) Reduction
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→ addition of oxygen or → removal of hydrogen or → loss of electrons Natural oxidation in everyday life: → Corrosion & Rancidity	→ loss or removal of oxygen → gain or addition of hydrogen → gain of electrons Natural reduction in everyday life: → Hydrogenation
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Redox Reactions : Both oxidation and reduction taking place simultaneously in the same chemical reaction.

Oxidizing agent : A substance which brings about the oxidation of other substance but itself gets reduced in a reaction.

Reducing agent : A substance which brings about reduction of the other substance but itself gets oxidized in a reaction

Some examples of redox reactions :

