

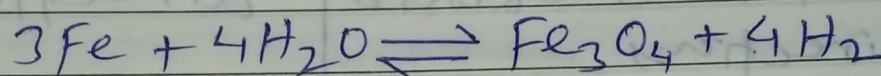
Chemical Equilibrium

①

(i) Reversible reactions: —

A chemical reaction in which the reactants react to form products while the products re-combine to form the reactants is called reversible reaction.

e.g.

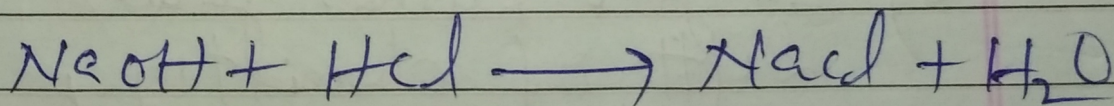
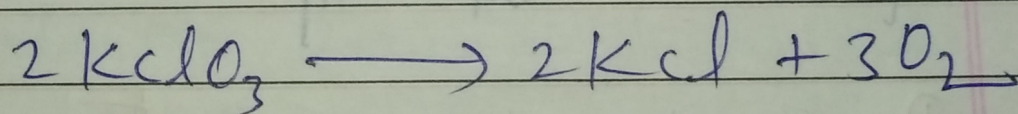
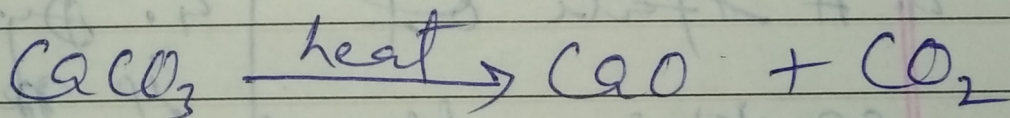


The sign ' $\rightleftharpoons$ ' indicates the reversibility and equilibrium.

(ii) Irreversible reactions: —

A chemical reaction, in which reactants react to form products but the products do not react to give reactants, is called an irreversible reaction.

e.g.



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②

Difference between Reversible and Irreversible reaction: -

<u>Reversible</u>	<u>Irreversible</u>
1. It takes place both in forward and in backward directions	1. It takes place only in forward direction.
2. It cannot be completed	2. It may be completed.
3. Free energy change becomes zero ($\Delta G = 0$)	3. Free energy change is negative ($\Delta G < 0$)
4. A state of equilibrium attained.	4. Dynamic equilibrium is never attained.

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