

Class 10 Chemistry - Chapter 1

Chemical Reactions and Equations

1. Chemical Reaction

- Jab ek ya adhik padarth milkar naye padarth banate hain jinke gun alag hote hain, use chemical reaction kehte hain.
- Lakshan: Rang badalna, gas nikalna, tapman ka badhna/ghatna, avshesh banna.

2. Chemical Equation

- Chemical reaction ko symbols aur formulas ke roop me likhna chemical equation kehlata hai.
- Example: $\text{Mg} + \text{O}_2 \rightarrow \text{MgO}$

3. Balanced Chemical Equation

- Equation me reactants aur products dono taraf atoms ki sankhya barabar ho, use balanced equation kehte hain.
- Example: $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$

4. Types of Chemical Reactions

- (a) Combination Reaction: Do ya adhik padarth milkar ek naya padarth banate hain.
Example: $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$
- (b) Decomposition Reaction: Ek padarth toot kar do ya adhik padarth banata hai.
Example: $\text{CaCO}_3 \rightarrow \text{CaO} + \text{CO}_2$
- (c) Displacement Reaction: Zyada kriyashil tattv kam kriyashil tattv ko hata deta hai.
Example: $\text{Zn} + \text{CuSO}_4 \rightarrow \text{ZnSO}_4 + \text{Cu}$
- (d) Double Displacement Reaction: Dono padarth apne ions ka adan-pradan karte hain.
Example: $\text{Na}_2\text{SO}_4 + \text{BaCl}_2 \rightarrow \text{BaSO}_4 + 2\text{NaCl}$
- (e) Oxidation & Reduction:
 - Oxidation: Oxygen ka judna ya hydrogen ka hatna.
 - Reduction: Oxygen ka hatna ya hydrogen ka judna.

5. Corrosion

- Jab dhatu hawa aur nami ke prabhav se dheere-dheere kharab hoti hai, ise corrosion kehte hain.
- Example: Lohe par zang lagna

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6. Rancidity

- Tel-chiknayi wale khadya padarth hawa ke sampark me aakar kharab ho jate hain, ise rancidity kehte hain.