CBSE Notes

Chapter V

Separation of Substance

Why do we separate substance :

- Necessary things from unnecessary things.
- To remove impurities from pure substance.

Mixture ;

A mixture is a material made up of two or more different substance which are physically Combined . Mixture can be homogeneous or heterogeneous.

Homogeneous mixture:

A mixture in which constituent are distributed uniformly is called homogeneous mixture.

Heterogeneous mixture :

A mixture in which constituent are not distributed uniformly called heterogeneous mixture.

Separation Mixture:

Mixture is a that can be separated into two or more pure substance by simple physical means .

Method of separation :

a) **Hand picking:**
   - If a constituent of a solid mixture Is big and visibly different , it can be separated by hand picking.
   - Example : small stone can be separated from the rice .

b) **Winnowing :**
   - Winnowing can be use to separate lighter solid from heavier one.
   - Farmer used it to separate husk from grain.

c) **Sieving :**
   The method of separate particles of different sizes with the help of a sieve is called sieving.

d) **Threshing :**
   Beating a stalk on a hard object is called threshing . Threshing is done to separate the grain from the stalk.

e) **Magnetic separation :**

- A method in which magnet is used to separate the constituent of a mixture is called magnetic separation .

  Or
- Using magnet to separate magnetic materials from non magnetic is called magnetic separation.

f) Sedimentation :

- A solid liquid mixture of sand and water can be separated by leaving it undisturbed for sometime. This process is known as sedimentation.
- Solid layer form of sand at the bottom is called **sediment**.
- The liquid above the sediment is known as the **supernatant liquid.**

g) Decantation :

The liquid water above the sediment can be poured out into another container without disturbing the sediment . This process is called sedimentation.

h) Filtration :

This is used for separating fine insoluble solid particles from the liquid.

i) Dissolution:

This method is useful when one constituent of solid mixture is soluble in a solvent (water) and the other is not.

j) Evaporation :

- A process of conversion of water into its vapour is called evaporation.
- A solid can be recovered from its solution by evaporating the solvent.
- For example a solution of salt in water , when heated on a flame for sometime , remain the residue of salt .