

Q) Give a brief description of the principles of the following techniques taking an example in each case.

(a) Crystallisation    (b) Distillation

Ans) **Crystallisation:**

This is a most common method for the purification of solid organic compounds. It is based on the fact that certain organic compounds are partly soluble in a solvent at room temperature and solubility increases with increases in temperature. Example: separation of sugar from a mixture of sugar and common salt by using ethanol.

**Distillation:**

This method is based on the principle that at constant pressure every pure liquid boils at a definite temperature called its boiling point. The method is used for the purification of those liquids which boil without decomposition provided the impurities are non-volatile. The method is applied for the purification when the two liquid differs in the boiling points by 30-50K.