Hydrogen Bonding:

In 1920, Latimer and Rodebush introduced the idea of "hydrogen bond".

For the formation of H-bonding the molecule should contain an atom of high electronegativity such as F, O or N bonded to hydrogen atom and the size of the electronegative atom should be quite small.

Types of hydrogen bonding

(1) **Intermolecular hydrogen bond :** Intermolecular hydrogen bond is formed between two different molecules of the same or different substances.

(i) Hydrogen bond between the molecules of hydrogen fluoride.

(ii) Hydrogen bond in alcohol and water molecules

(2) **Intramolecular hydrogen bond** (Chelation)

Intramolecular hydrogen bond is formed between the hydrogen atom and the highly electronegative atom (F, O or N) present in the same molecule. Intramolecular hydrogen bond results in the cyclisation of the molecules and prevents their association. Consequently, the effect of intramolecular hydrogen bond on the physical properties is negligible.

For example : Intramolecular hydrogen bonds are present in molecules such as o-nitrophenol, o-nitrobenzoic acid, etc.