

Sem - VI
Paper - II
Types of Protein

(iii) Tertiary structure $\rightarrow$ It is the 3D shape of a single polypeptide chain formed by folding and bending due to interaction between R-group of an amino acid.

It determines the biological activity of the protein.

It also determines whether protein is fibrous or globular in shape.

following bonds are involved

- (a) H-bond
 - (b) Ionic bond
 - (c) Disulphide bridges
 - (d) Hydrophobic interaction.
 - (e) Van der Waals forces.
- (iv) Quaternary structure $\rightarrow$ It refers to the assembly of two or more polypeptide chains into a functional protein.

It is stabilized by the same bonds as tertiary

e.g.

- (i) Hemoglobin $\rightarrow$ 4 subunits ($2\alpha + 2\beta$ chains)
- (ii) Insulin $\rightarrow$ made up of A and B chains