PROTEIN

Proteins are versatile macromolecule made up of one or more polypeptide chains possessing a characteristic amino acid sequence. It is a polymer of amino acids.

The term protein was first proposed by Berzalius. It is made up of carbon, oxygen, hydrogen, nitrogen and sometimes sulphur.

They are building block and obtained both from animal and plant sources.

Classification:

proteins are classified into two groups on the basis of their Solubility or and shape and on the basis of increasing complexity of structure.

1) classification of protein on the basis of Solubility or Shape:

proteins are classified into two groups on the basis of Solubility and shape. They are globular protein and fibrous protein.

1) Globular protein:

Globular proteins are spherical in shape. They are soluble in water. They are highly branched. The polypeptide chains are cross linked by the usual peptide bonds.

The globular protein molecules are tightly folded into spherical or globular shapes.

The globular proteins include
- Enzymes, protein hormones, antibodies

haemoglobin, myoglobin etc

2) Fibrous protein:

They are in the form of fibre and insoluble in water. They are highly resistance to digestion by proteolytic enzymes. They are unbranched. They are linear molecules. The long linear protein chains are held together by inter-molecular hydrogen bonds. They are not folded into globular molecules. They serves as structural protein.

The common fibrous protein are Collagen of tendon, Elastin of connective tissue, Fibroin of silk, Keratin of hair, actin and myosin etc.

2) Classification of proteins Based on the Increasing Complexity of Structure.

On the basis of increasing complexity of structure, proteins are classified into.

1. Simple protein
2. Conjugated protein
3. Derived protein.

1) Simple protein:

The protein which yield-