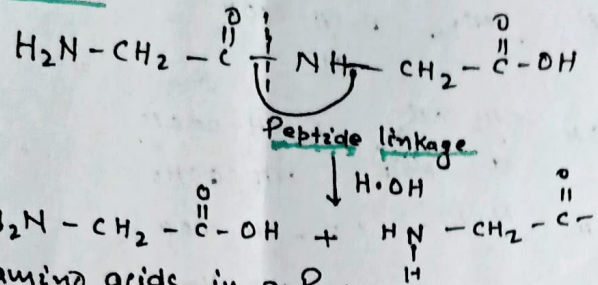
Amino Acids

M.Sc. Sem-II

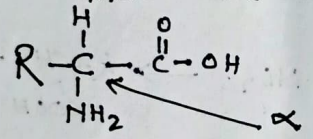
Amino acids are the hydrolysis product of proteins by the cleavage of peptide bond.



Number of amino acids in a Protein (n)
= (n-1) Peptide linkage

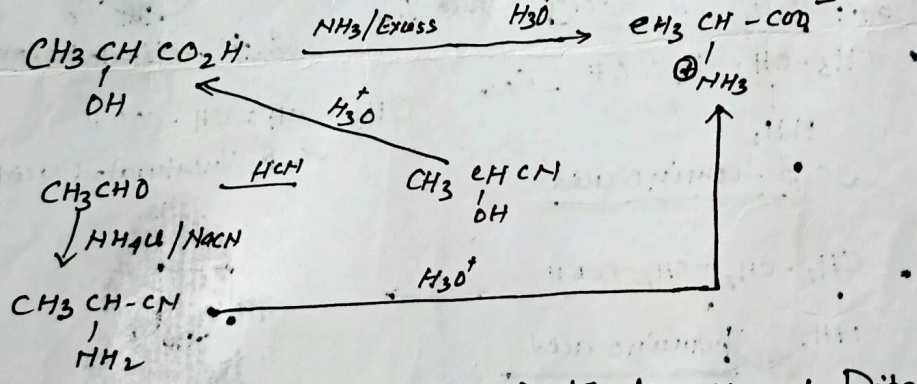
Dipeptide means it contains two amino acid with One peptide linkage.
Tripeptide Means it contains three amino acids with two peptide linkage

There are 20 (twenty) amino acids all being α amino acid.

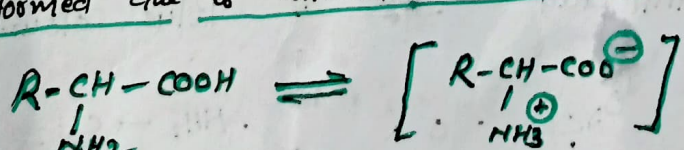


All have 1° amine ($-NH_2$) gr. except proline which has Secondary (cyclic) amino acid.
Each amino acid is reffered by a three-letters alphabet code.
Glycine — Gly ; Valine — Val , Alanine — Ala etc.

Synthesis :-



Properties :- Amino acids is soluble in water due to foomation of Dipolar ion. (dipolar ion is known as Zwitter ion) This dipolar Zwitter ion is formed due to internal neutralisation.



Cation is the charged ion
Anion is -ve charge ion.

Zwitter ion

In acidic medium (PH < 7) Zwitter ion exist as Cation and migrate to Cathode on passing electric current.
In Basic medium (PH > 7) Zwitter ion exist as Anion and migrate to anode on passing Electric Current.
At Certain PH there is no migration of Zwitter ion.
This no migration point of zwitter ion is known as isoelectric point of amino acid.