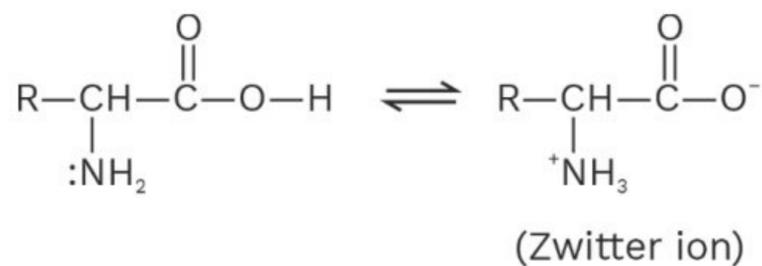




due to the presence of both basic (amino group) and acidic (carboxyl group) groups in the same molecule.

Zwitter Ion

- In aqueous solution, amino group can accept a proton and the carboxyl group can lose a proton, which give rise to a dipolar ion termed as zwitter ion.

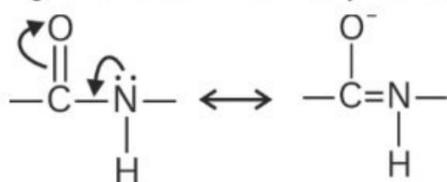


- Zwitter ion contains both positive and negative charges but is neutral in nature.
- As α -carbon atom is asymmetric; therefore, all other naturally occurring α -amino acids are optically active, except glycine. These exist both in 'D' and 'L' forms. L-configuration is the most naturally occurring amino acid. L-Amino acids are represented by writing the $-\text{NH}_2$ group on the left-hand side.

Peptide bond or Peptide Linkage

Peptides are those amides which are formed due to condensation between 2NH_2 group and $-\text{COOH}$ group of two different amino acids.

- The $-\text{CO}-\text{NH}-$ bond is called peptide linkage or bond. The $>\text{C}=\text{O}$ group of an amide is sp^2 hybridised with coplanar structure.



- To eliminate water molecule and form peptide bond $-\text{CONH}-$, the combination of the amino group of one molecule with the carboxylic group of other, there is a reaction between two molecules of similar or different

Rack your Brain



Glycine exists as a zwitter ion but o- and p-aminobenzoic acids not exists. Why?

Concept Ladder



pH at which there is no net migration of the amino acid under the influence of an applied electric field is called isoelectric point.

Previous Year's Questions



In a protein molecule various amino acid are linked together by
[AIPMT-2012]

- (1) Peptide bond
- (2) Dative bond
- (3) α -glycosidic bond
- (4) β -glycosidic bond

