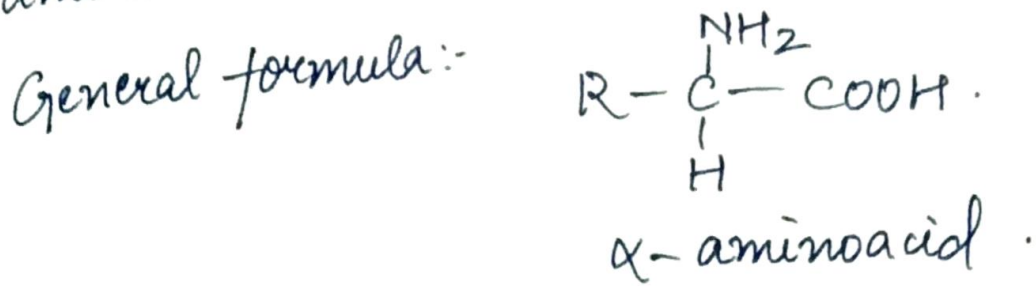


AMINO ACIDS

The compounds containing amino group ($-NH_2$) and carboxylic group ($-COOH$) are called amino acids.



• R = H / alkyl / aryl group.

Except glycine, α -amino acids are optically active.

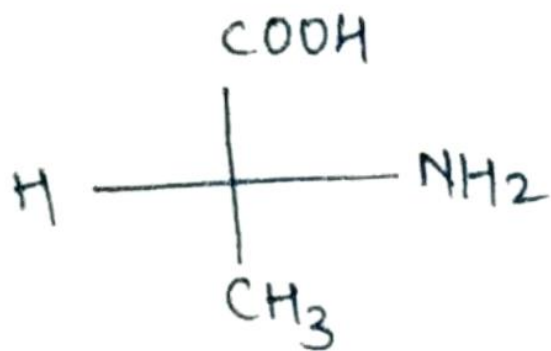
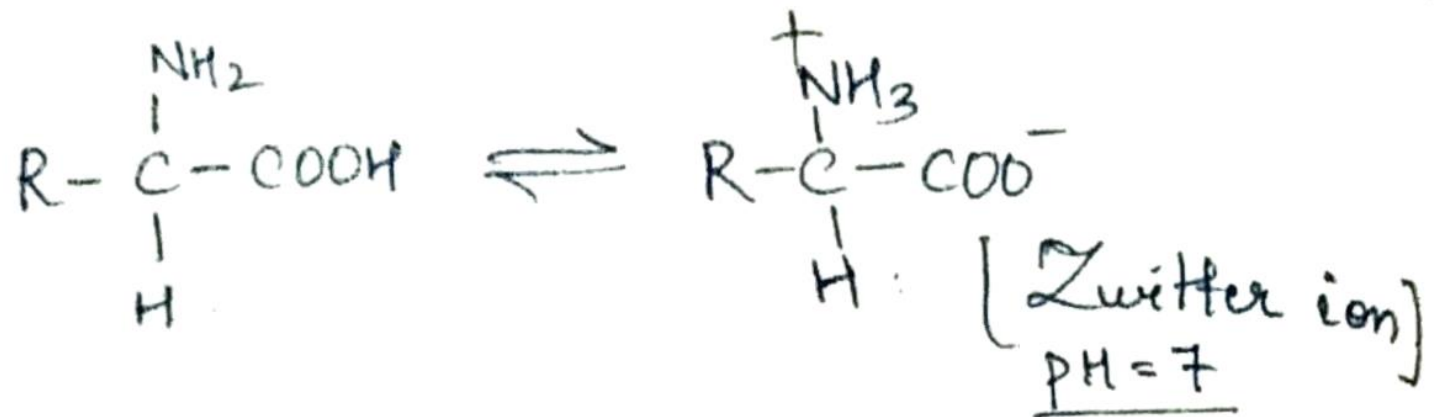
AMINO ACID (20)

(10) Essential Amino Acid

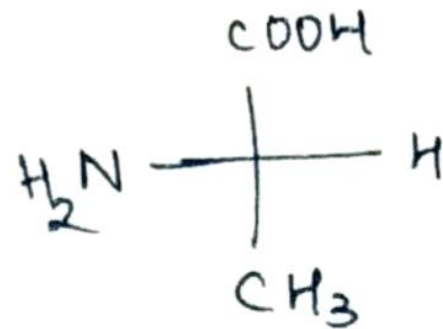
- Phenylalanine (Phe)
- Valine (Val)
- Tryptophan (Trp)
- Threonine (Thr)
- Isoleucine (Ile)
- Methionine (Met)
- Histidine (His)
- Arginine (Arg)
- Lysine (Lys)
- Leucine (Leu)

(10) Non-essential Amino Acid.

- Glycine (Gly)
- Alanine (Ala)
- Glutamic Acid (Glu)
- Aspartic Acid (Asp)
- Glutamine (Gln)
- Asparagine (Asn)
- Serine (Ser)
- Tyrosine (Tyr)
- Cysteine (Cys)
- Proline (Pro)



D- α Amino acid



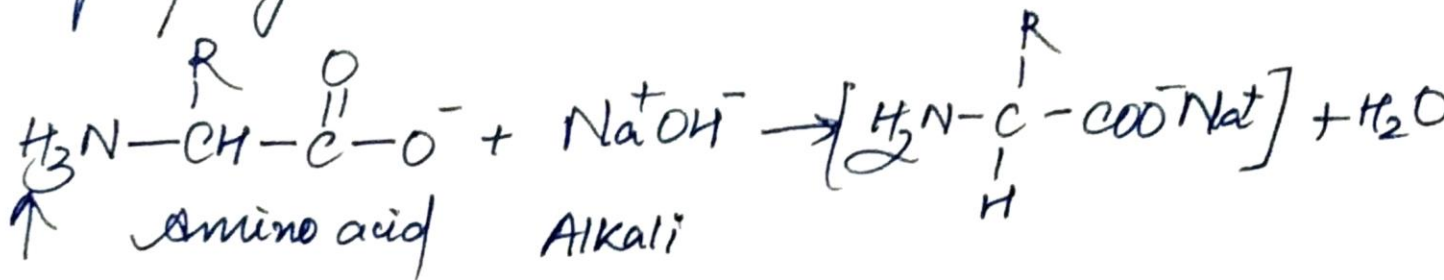
L- α Amino acid.

* In the structure of amino acids basic ($-NH_2$) as well as acidic ($-COOH$) group both are present. So amino acids should show amphoteric nature.

* But at present it has proved that the acidity of amino acids is due to the presence of $-NH_2$ group and basicity is due to $-COOH$ group.

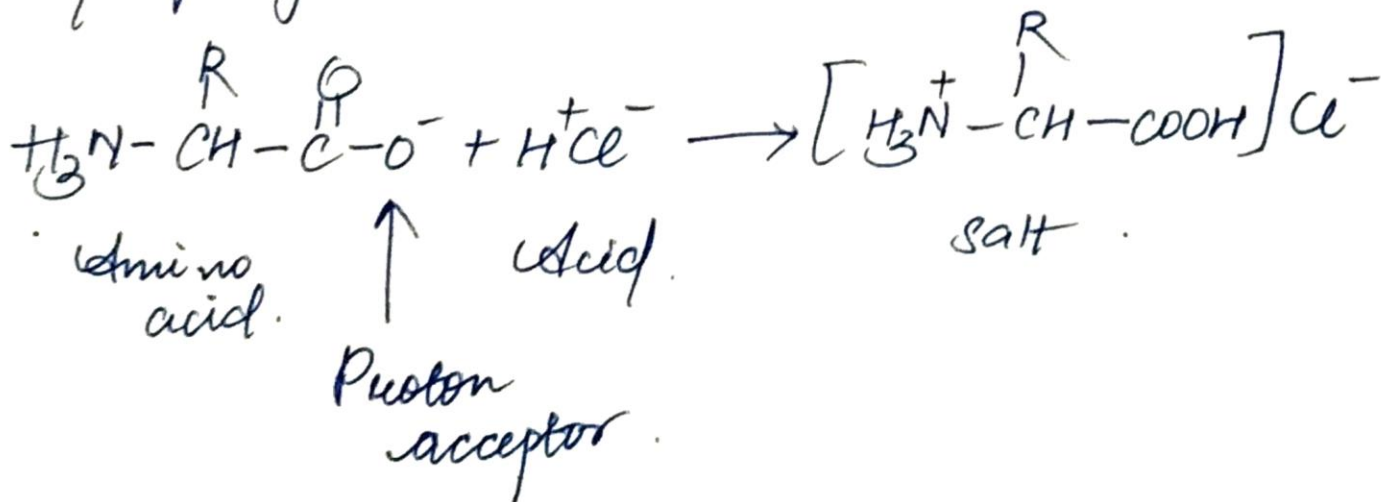
When the H^+ ion from $-COOH$ group is transferred to $-NH_2$ group, internal salt is formed and present crystalline form as Zwitter ion.

Acidic property:-



Proton donor

Basic property:-



* Peptide Bond :-

The $-CONH-$ link resulting from the reaction between two molecules of α -amino acids is called as peptide bond.

