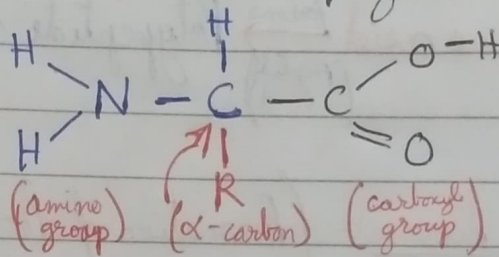


* Proteins

- They are ^{polymer of} $\text{l}-\alpha$ -amino acids (monomers)
- Here, Polymer \rightarrow large no. of similar units bonded together
 $\text{l} \rightarrow$ ~~levo~~ stereoisomer
 $\alpha \rightarrow$ amino group ($-\text{NH}_2$) attached to α -carbon
 α -carbon \rightarrow 1st carbon adjacent to the carboxyl group

- Proteins contain 20 different amino acids linked together by peptide bonds. Hence, it is a polymer of $\text{l}-\alpha$ -amino acids

- Structure :-
($\text{l}-\alpha$ -amino acid)



[\therefore Structure of Protein
 \downarrow
chain of amino acids]

- They are used :-
 - To build cells
 - Act as hormones & enzymes

does useful functions
in the body

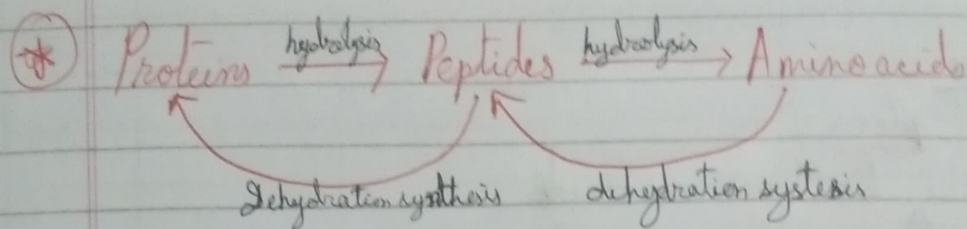
act as catalyst in
chemical reaction

- Classification of Proteins :-

1) Based on Structure :- • Fibrous • Globular • Intermediate

2) Based on Composition :- • Simple • Conjugated

3) Based on Function :- • Enzymes, Hormones, Structural proteins
• Pigments, Transport & Contractile Proteins
• Storage Proteins & Toxins.

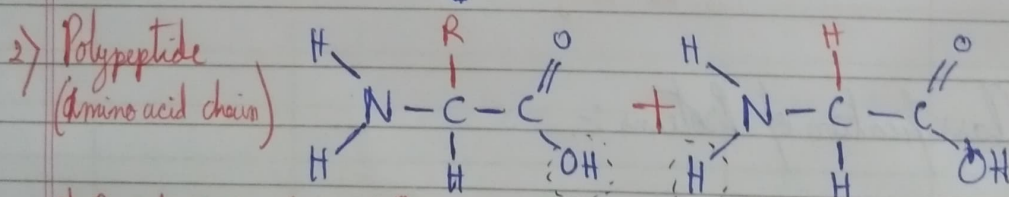
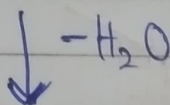
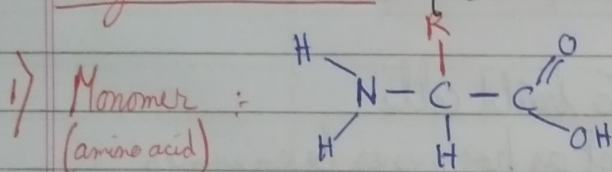


Hydrolysis \rightarrow Water (H_2O) is added to break down peptide bonds, splitting proteins back into individual amino acids

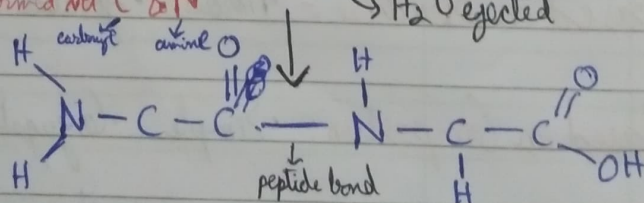
Dehydration synthesis \rightarrow Water (H_2O) is removed when carboxyl group of one amino acid bonds with the amino acid of another forming a peptide bond (amino group)

\therefore 2 Amino acid $\xrightarrow[\text{(peptide bond)}]{\text{forms}}$ Polypeptide chain $\xrightarrow[\text{into}]{\text{folds}}$ Proteins

Dehydration Process : (formation of Proteins)



* Peptide bond is formed betⁿ C & N



3) Protein (multiple polypeptides) (around 20 amino acids)

* polypeptide chain is folded to form Proteins

