Biomolecules

toppr

Biomacromolecules, Metabolic Basis for Living, Bond-linking Monomers

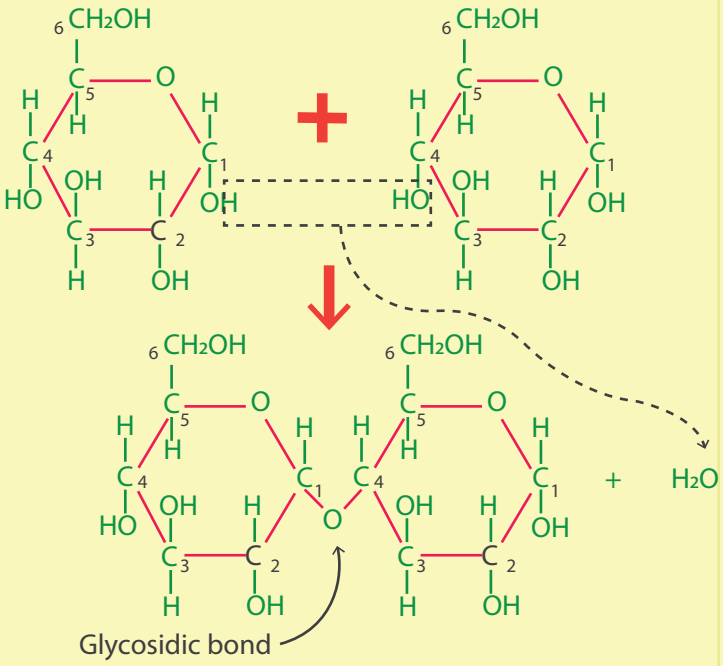
Biomolecules: Molecules produced by the cells

Biomicromolecules

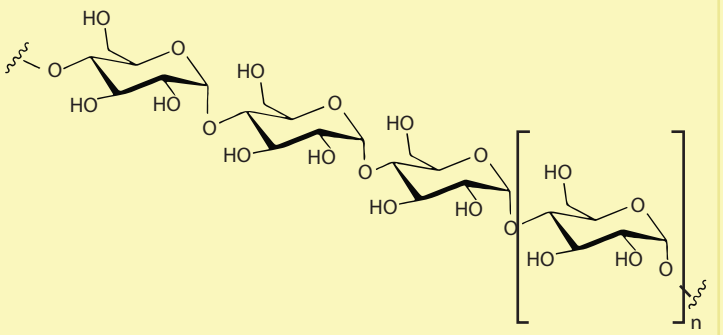
Biomacromolecules

Polysaccharides

- Made up of monosaccharides like glucose, fructose etc.
- Linked by glycosidic bonds



Structure of Polysaccharide

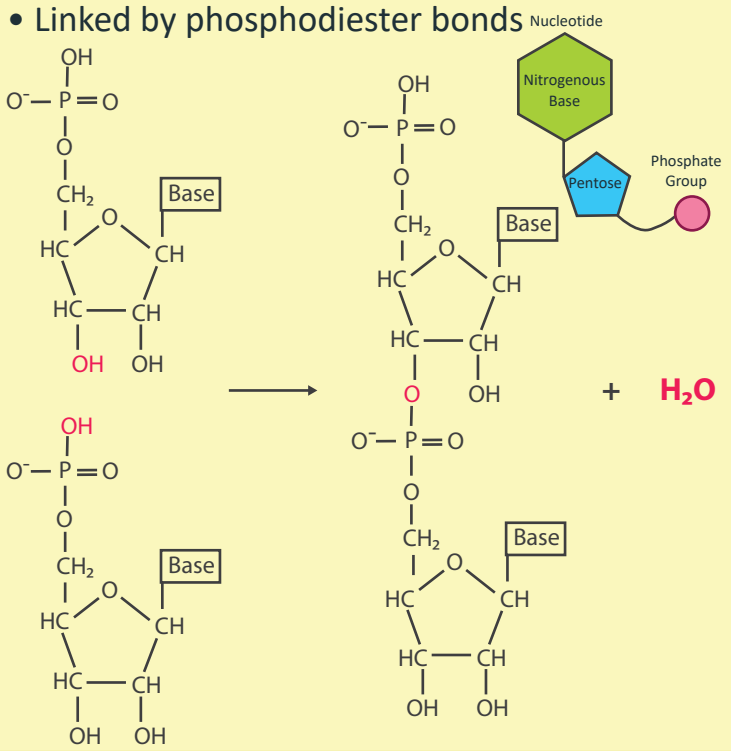


Lipids

- Hydrophobic molecules
- On hydrolysis, lipids yield glycerol and fatty acids
- Lipids are found in fats, oils, hormones and other structures such as the cell membrane, and also stored in the body as adipose tissue
- Lipids function as energy-storage molecules, chemical messengers, and structural components of cells

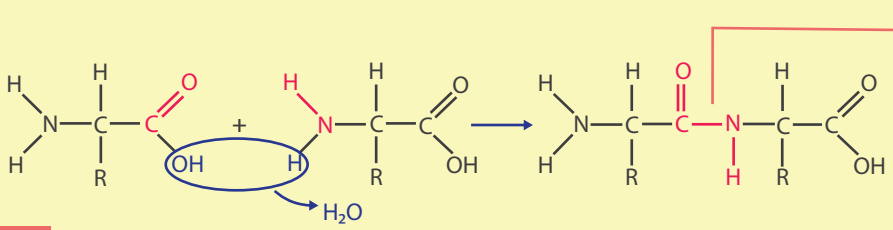
Nucleic Acids

- Made up by smaller units called nucleotides
- Linked by phosphodiester bonds

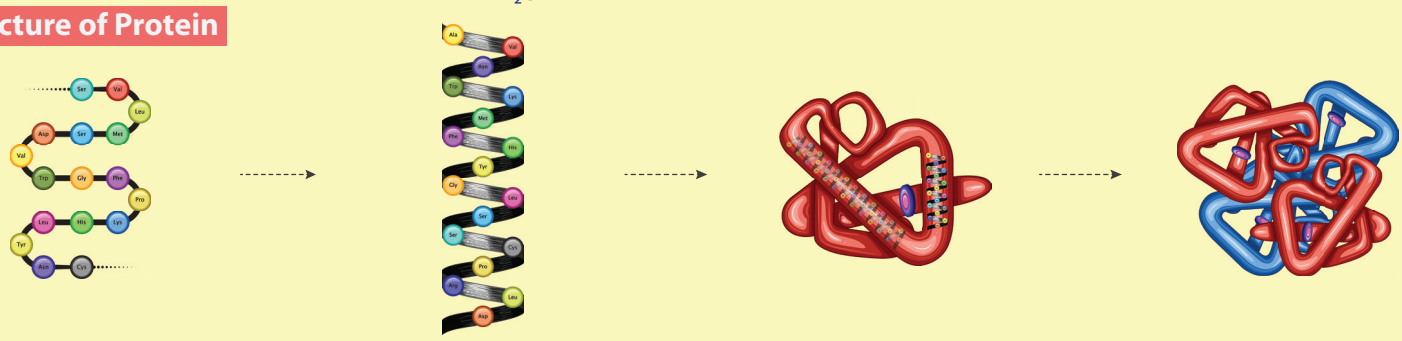


Proteins

- Made up of simpler units known as amino acids
- Linked by covalent bonds called peptide bonds

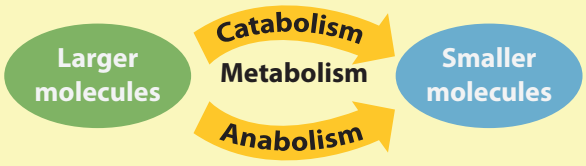


Structure of Protein

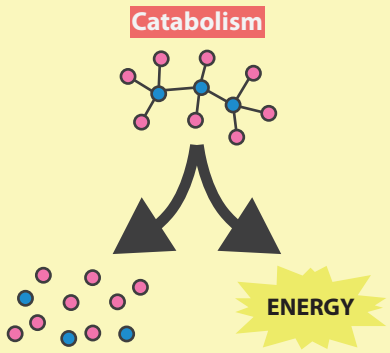


Primary Structure (Amino acid residues) | Secondary Structure (α-helix) | Tertiary Structure (Polypeptide chain) | Quaternary Structure (Assembled subunits)

Important metabolic processes in the body-
digestion, circulation, excretion, regulation of body heat

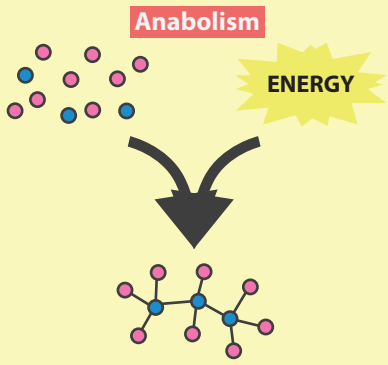


Catabolism



Endothermic reaction
By-product - Water

Anabolism



Exothermic reaction
Hydrolysis reaction