

# BIOMOLECULES

## IMPORTANT ONE LINERS

- ① → Lipids are a fatty acid has a carboxyl group attached to an R group.
- ② → Fats [triglycerides] = Glycerol + three fatty acids
- ③ → Phospholipids = Glycerol + two fatty acids + phosphate
- ④ → Steroids = Four carbon rings.
- ⑤ → Oils have lower melting point and hence remain as oil in winters.
- ⑥ → Nucleosides = Nitrogen bases + Ribose sugars  
↳ eg:- Adenosine, Guanosine, thymidine, uridine and cytidine.
- ⑦ → Nucleotides = Nitrogen bases + phosphate + Ribose sugar  
↳ eg:- Adenylic acid, Guanylic acid group
- ⑧ → DNA and RNA function as genetic material.
- ⑨ → Secondary metabolites → do not aid directly in growth / development only required for survival
- ⑩ → Primary metabolites → play known roles in normal physiological processes.
- ⑪ → There are 21 types of Amino acids.
- ⑫ → Collagen is the most abundant protein in the animal world.
- ⑬ → Ribulose biphosphate carboxylase - Oxygenase is the most abundant protein in the whole of the biosphere.
- ⑭ → Polymeric polysaccharide consisting of only one type of monosaccharide i.e glucose is cellulose.
- ⑮ → Starch is a store house of energy in plant tissues.
- ⑯ → Animals have glycogen as energy source.
- ⑰ → Inulin is a polymer of fructose.



- (18) → In a polysaccharide chain the right end is called the reducing end and the left end is called non-reducing end.
- (19) → Exoskeleton of arthropods have a complex polysaccharide called chitin.
- (20) → Peptide bond is formed when the carboxyl group of one amino acid reacts with the amino group of the next amino acid with the elimination of a water moiety.
- (21) → Glycosidic bond is also formed by dehydration between two carbon atoms of two adjacent monosaccharides.
- (22) → The breaking and making of biomolecules through chemical reactions constantly occurring in living organisms collectively called metabolism.
- (23) → Adenosin triphosphate [ATP] :- most important form of energy currency in living systems.
- (24) → Almost all enzymes are proteins.
- (25) → Factors affecting enzyme activity :- temperature, effect of pH
- (26) → Non-protein constituents called co-factors are bound to the enzyme to make the enzyme catalytically active.
- (27) → Three kinds of co-factor :- prosthetic groups, co-enzymes and metal ions.
- (28) → Competitive Inhibition :- Reversible, occurs due to substrate or increase enzyme analogue.
- (29) → Non-Competitive Inhibition :- Inhibitor forms a complex with enzyme at a site other than this active site.
- (30) → Allosteric Inhibition :- Inhibitor binds to enzyme at specific site other than active site and change the structure of active site to affect substrate binding.