

Topic :- Biomolecules

- 1 **(c)**
Transformation of biomolecules results due to the metabolic reactions occurring in body. Hydrolysis of glycosidic bond in a disaccharide results in the formation of simpler monosaccharides

- 2 **(b)**
Sucrose is most abundant in plants. It consists of 1-D glucose and 1, D fructose units jointed by α 1-2 glycosidic linkage. Due to absence of aldehyde group at 1-C atom, the sucrose is non-reducing sugar.

- 3 **(a)**
Phospholipids are conjugated lipids. There are esters of fatty acids and alcohol but contain some acids and glycerol

- 4 **(d)**
Glycine max or soybean is the richest source of protein (36-44%). From its seeds edible oil and a milk-like substance is obtained, which is used as a substitute of milk.

- 5 **(d)**
Starch is present as a store house of energy in plant tissues

- 6 **(b)**
Keratin of hair and myosin of muscle have α -helical structure. Fibroin, the protein in silk fibres produced by insects and spiders, has pleated structure

- 7 **(b)**
The most abundant chemical in living organisms is water.
Water content is 70-90% of the total cellular mass

- 8 **(d)**
F Sanger (1953) first time deciphered the sequence of amino acid in a protein, *i.e.*, bovine insulin. Proteins are made up of amino acids and amino acids are held together by peptide bonds.

- 10 **(c)**
Collagen is the most abundant protein in animal world
- 11 **(c)**
Proteins with catalytic power are called enzymes. Their basic function is their involvement in the change of rate of reaction either increase or decrease
- 12 **(a)**
The α -helix, random coil and β -pleated sheets are termed the secondary structure of proteins
- 13 **(d)**
All are structural proteins.
- 14 **(d)**
All statements are correct
- 15 **(b)**
Enzymes catalyses the biochemical reactions by lowering the activation energy
- 16 **(c)**
Glucose
- 17 **(b)**
I. Red
II. Long stretches of repetitive base pairs is called satellite DNA
III. Phosphoric acid, pentose sugar and nitrogenous organic base
- 18 **(b)**
The acid soluble pool represents the cytoplasmic composition of cell. The macromolecules from cytoplasm and organelles becomes acid insoluble fraction. Together, they represent the entire chemical composition of living tissues or organisms
- 19 **(b)**
Transferases catalyze transfer of group G (other than hydrogen) between a pair of substrates, S and S', e.g.,

$$S - G + G' \xrightarrow{\text{Transferase}} S + S' - G$$

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(c)

There are certain enzymes which have slightly different molecular structure but have similar catalytic function. Such enzymes are called isoenzymes or simply isozymes. LDH (Lactic dehydrogenase) is a good example of isoenzymes

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ANSWER-KEY										
Q.	1	2	3	4	5	6	7	8	9	10
A.	c	b	a	d	d	b	b	d	a	c
Q.	11	12	13	14	15	16	17	18	19	20
A.	c	a	d	d	b	c	b	b	b	c

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