

صرف آپیکٹو سوال کے جوابات کے لیے (For Use of Objective Questions Only) صرف آپیکٹو سوال ہی جوابی لا۔

Code \_\_\_\_\_

Q: No. Answer Classification of Carbohydrates

1

Carbohydrates

2

3

Simple

Complex

4

5

monosaccharides

Oligosaccharides

Polysaccharides

6

7 ① Monosaccharides: → Greek word, mono = One and Sakron = Sugar.

8 → They are the simplest sugars and can't be hydrolyzed.

9 → The general formula is  $C_n(H_2O)_n$ .

10 Examples: - Glucose, Fructose, Galactose.

11 ② Oligosaccharides: - Greek word, Oligo = few and Sakron = Sugar.

12 → Oligosaccharides are compound sugars that yield 2 to 10

13 molecules of same or different monosaccharides

14 on hydrolysis.

15 → The general formula is  $C_n(H_2O)_{n-1}$  for disaccharides

16 and  $C_n(H_2O)_{n-2}$  for tetrasaccharides

17 → Oligosaccharide yielding 2 molecules of monosaccharide

18 on hydrolysis is called disaccharide.

19 → Oligosaccharide yielding 3 or 4 monosaccharides are

20 called trisaccharides or tetrasaccharides respectively:

Example: - Sucrose, Lactose, Maltose.

### ③ Polysaccharides: Greek word :-

Poly = many , Sakron = sugar

→ These are complex sugars and yield more than 10 molecules of monosaccharides on hydrolysis.

→ The general formula is  $(C_6H_{10}O_5)_n$ .

Example :- starch , glycogen.

### Proteins: Classification

→ On the basis of structure proteins are classified

as :-

① Primary structure Protein :- Long chain of amino-acids arranged in a particular sequence.

② Secondary structure Protein :- Polypeptide chain coiled into spiral or helix to have three-dimensional structure. Examples :- Keratin , silk fibres etc.

③ Tertiary structure Protein :- long polypeptide chain become more stabilized by folding and coiling by forming ionic or disulphide bridges.

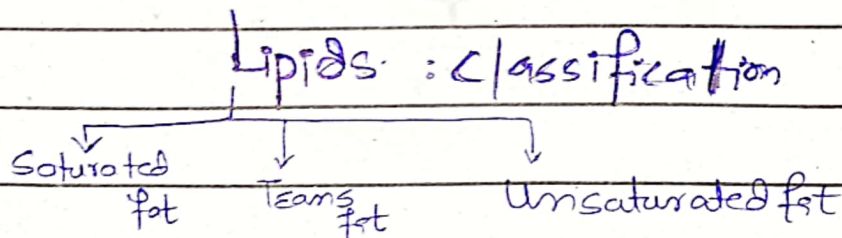
Examples :- Globulins of blood.

④ Quaternary structure Protein :- when a protein is an assembly of more than one polypeptide or subunits. Examples :- Hemoglobin & Insulin.

## On the basis of biological function Proteins 5

are classified as:-

- ① Enzymatic Proteins:- They are specialized proteins with catalytic activity. Examples: Urease, catalase, cytochrome C etc.
- ② Structural Protein :-> These proteins aid in strengthening or protecting biological structures. Examples:- Collagen, elastin, keratin etc.
- ③ Transport or carrier proteins:- These help in transport of ions or molecules in the body. Examples = Myoglobin, haemoglobin.
- ④ Nutrient and storage proteins:- These provide nutrition to growing embryos and store ions. Example = AFP.



- ① Saturated fat: it is called solid fat because it is solid at room temperature. It is mostly in animal food such as milk, cheese and meat.
- ② Trans fat:- This is a fat that has been changed by a process of hydrogenation. The sources are:- Cookies, Crackers, chips.
- ③ Unsaturated fat:- it is liquid at room temp:- It is mostly in oils from plants.