

Paper - 8 (MSE)

Classification of Carbohydrate.

Carbohydrate is a group of organic compounds occurring in living tissue and foods in the form of starch, cellulose and sugars.

The ratio of oxygen and hydrogen in carbohydrate is the same as in water i.e. - 2:1.

It typically breaks down in the animal body to release energy.

Carbohydrate have been classified on the basis of carbohydrate structure: such as aldehyde and ketones are known as polyhydroxy.

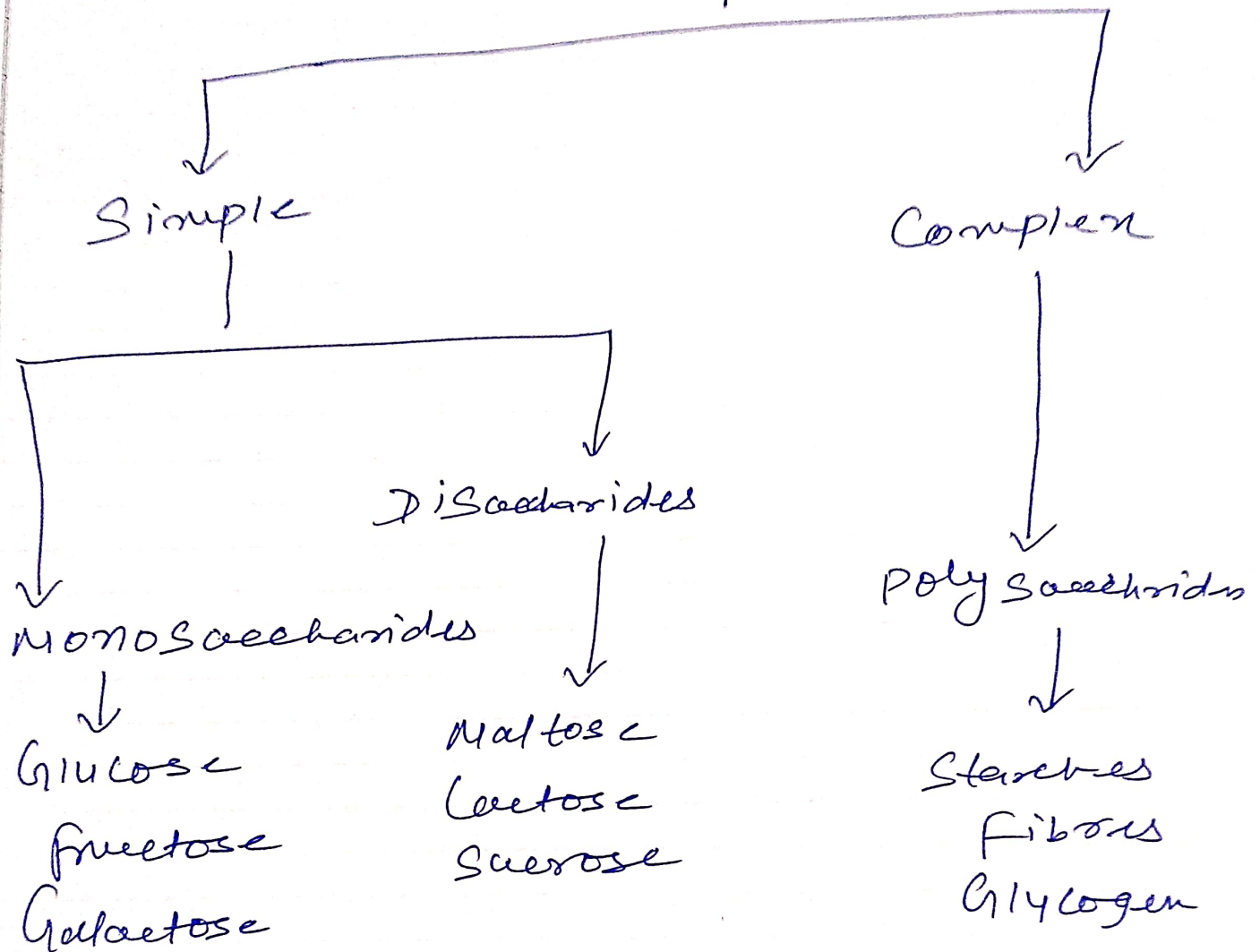
Cellulose, starch and hydrogen are among the compounds that belongs to this family.

Optically active polyhydroxy aldehyde or ketones or the compounds which produce units of such type on hydrolysis.

We know Carbohydrate are an important part of any animal's diet. ex - Maltose etc.

Types of Carbohydrates -

Carbohydrate



Simple Carbohydrate are the basic type of Carbs. Soft drinks, Candy, cooking and other Snacks contain simple Carbohydrates.

Simple Carbohydrate also are found in Natural Sugars.

Simple Carbohydrate are two type Monosaccharides and Disaccharides.

Monosaccharides are the smallest of the Carbohydrate. There are only one sugar unit.

The small size of monosaccharides gives them a special role in digestion.

Disaccharides:-

The two monosaccharide units are joined by oxide linkage which is formed by the loss of water molecule. And this linkage is called glycosidic bond.

Sucrose is one of the most common disaccharides which on hydrolysis gives glucose and fructose.

Polysaccharides -

Polysaccharides contain long mono-saccharide units joined together by glycosidic linkage.

Most of them act as food storage reserve - starch: starch is the main storage polysaccharide for plants.

It is a polymer of α -glucose and contains two components Amylose and Amylopectin.

Cellulose is also one of the polysaccharides that are mostly found in plants.

It is composed of β -D glucose units joined by a glycosidic linkage between C_1 of one glucose unit and C_4 of the next glucose unit.