DATE 26-6-2020

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Notes for B.Sc part 3rd paper VI,
Unit = 2(3).

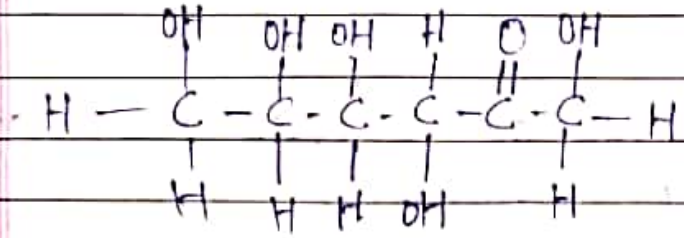
Que. (2.) Write Notes on Clasification of Carbohydrate ?

Carbohydrate, Class of Naturally occuring Compounds and derivatives formed from them. In the early part of the 19th Century, Substances such as wood, Starch, and linen were found to be Composed mainly of Molecules Containing atoms of Carbon (C), hydrogen (H,d, and oxygen (O) and to have the general formula $C_6H_{12}O_6$; Other organic Molecules with Similar formulas were found to have a Similar ratio of hydrogen to oxygen. The general formula $C_x(H_2O)_y$ is Commonly used to represent many Carbohydrates, which means "watered Carbon"

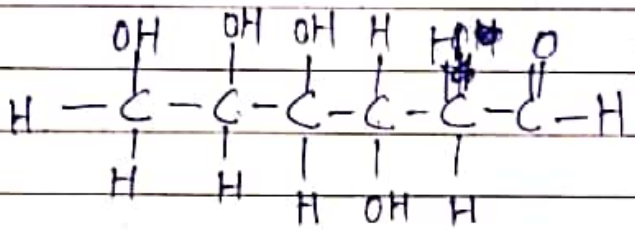
Although a Number of Clasification Schemes have been devised for Carbohydrates, the division into four major groups — Monosaccharides, disaccharides

polysaccharides — used here is among the most common.

isomers.



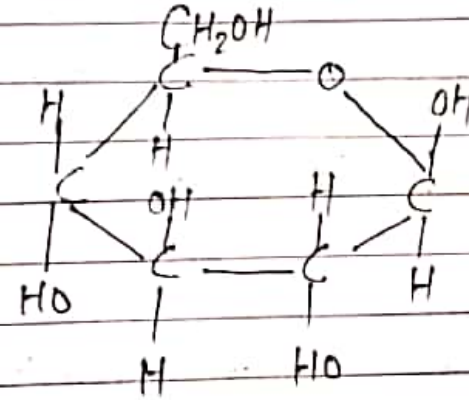
Fructose



Glucose.

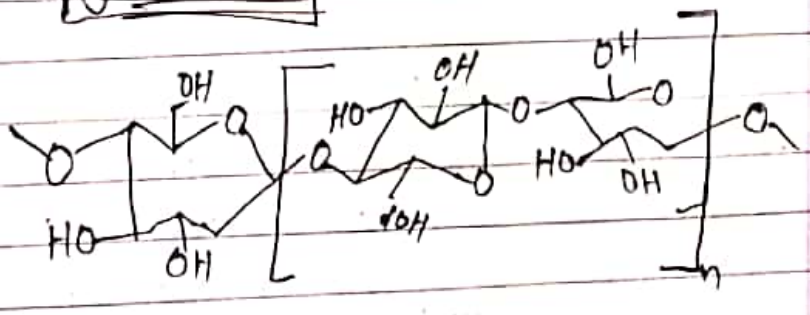
Slight Changes in Structural arrangements are detectable by living things and influence the biological Significance of isomeric Compounds. It is known, for example, that the degree of Sweetness of Various Sugars differs according to the arrangement of the hydroxyl groups (–OH) that Compose part of the Molecular Structure.

plant Starch May be processed into foods Such as bread, or it May be Consumed directly as in potatoes for instance. Colycogen, which Consists of branching Chains or glucose Molecules, is formed in the liver and Muscles of higher animals and is Stored as an energy Source.



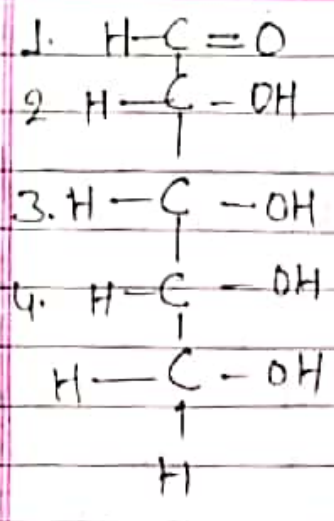
Glucose.

~~Glucose~~

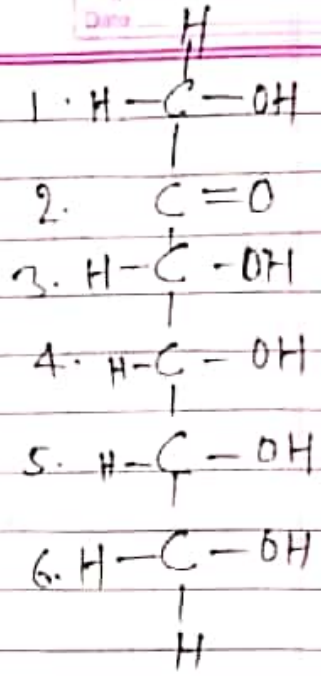


Cellulose.

The generic Nomenclature ending for the Monosaccharides is - ose. thus, the term pentose (pent = five) is used for Monosaccharides



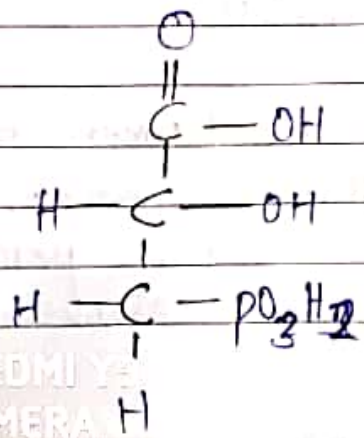
Aldopentose



Ketohexose

* Biological Significance —

The importance of Carbohydrates to living things can hardly be overemphasized. The energy stores of most animals and plants are both Carbohydrate and lipid in Nature; Carbohydrates are generally available as an immediate energy source, whereas lipids act as a long term energy resource and tend to be utilized at a slower rate.



3-phosphoglyceric