

NAME :: FAHEEMA YUSUFZAI

SUBJECT :: BIOCHEMISTRY

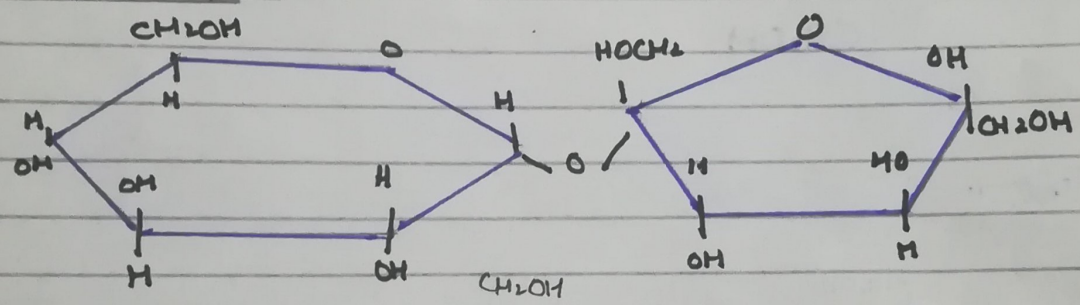
DATE :: 9<sup>th</sup> JULY 2020

ASSIGNMENT :: VIVA

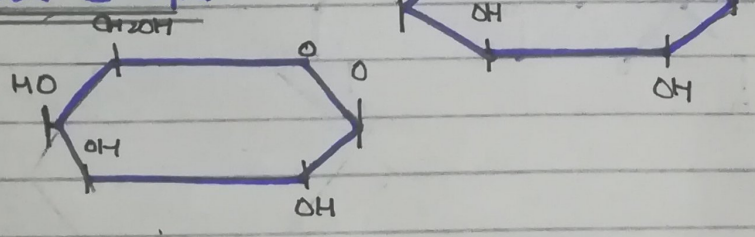
I'D NUMBER :: 16990

Q.1. DRAW STRUCTURES OF THE FOLLOWING ::

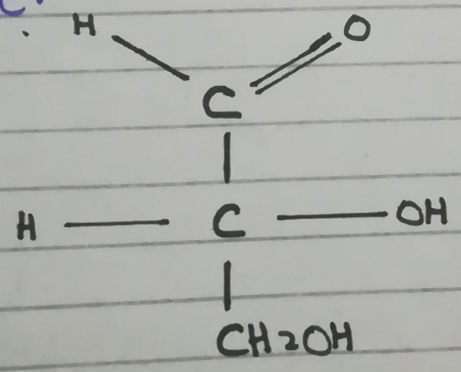
1. TABLE SUGAR ::



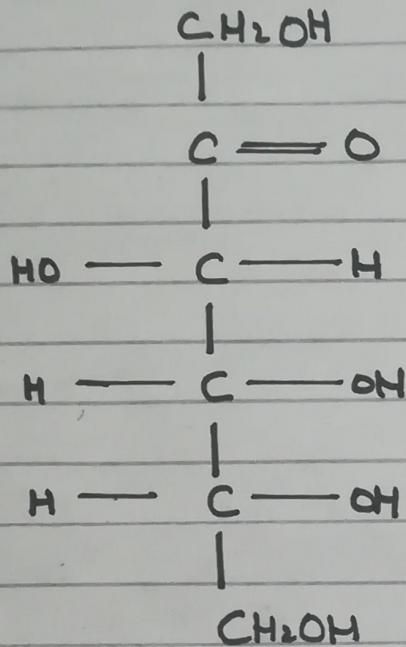
2. MILK SUGAR ::



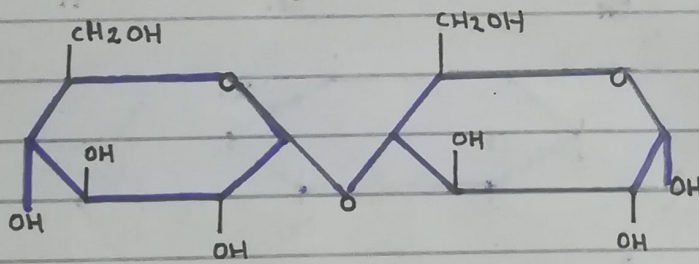
3. GLYCERALDEHYDE ::



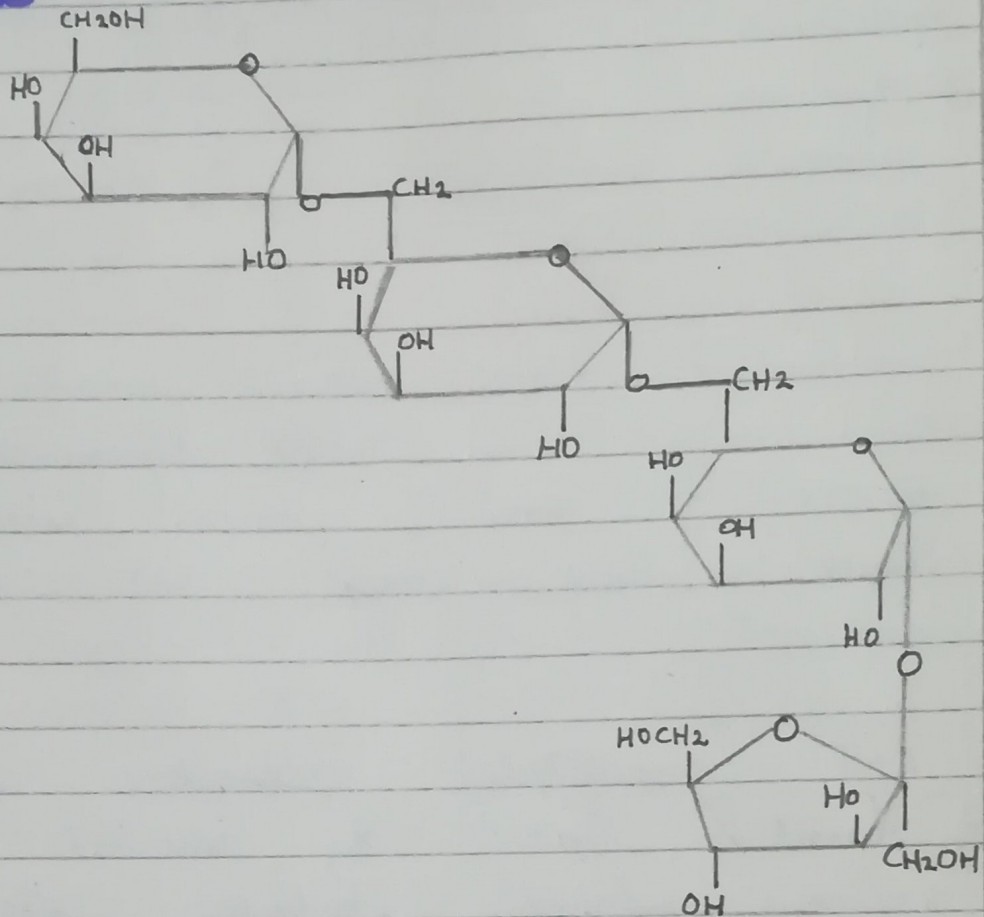
4. FRUCTOSE ::



5. MALTOSE ::



## C. STACHYOSE:



Q<sub>2</sub>. Discuss the Watson and Crick Model of DNA?

## WATSON AND CRICK MODEL OF DNA:

Crick and Watson first knew that DNA was composed of subunits called nucleotides.

→ A nucleotide is made up of sugar, a phosphate group, and

One of four nitrogenous bases:

- adenine
- thymine
- guanine
- cytosine

C and T bases, which have just one ring are called pyrimidines while A and G bases which have two rings are called purines.

DNA nucleotides assemble in chains linked by covalent bonds which forms between the deoxyribose sugar of one nucleotide and phosphate group of the next. This arrangement makes an alternating chain of deoxyribose sugar and phosphate group in the DNA polymer, a structure known as sugar phosphate backbone.

## WATSON AND CRICK MODEL OF DNA

- DNA stands for Deoxyribose nucleic acid which is a molecule that contains the instructions an organism needs to develop, live and reproduce.
- It is a type of nucleic acid and is one of four major type of macromolecules that are known to be essential for life.
- The structure was composed of Crick and Watson, consist of two long helical strands coiled around axis. Each DNA molecule comprises of biopolymer strand. Each strand has a 5' end and 3' end. The strands are antiparallel. The diameter of double helix is 2nm and repeats an interval of 3.4nm which is ten base pair. The strands are held together by hydrogen bond. The deoxyribonucleic acid are linked together by 3'-5'

phosphodiester bond. The nitrogenous bases are Adenine, thymine, cytosine, guanine. The structure of DNA is a double helix because it looks like a twisted ladder. The ladder made of alternating sugar and phosphate molecules while step of ladder are made of nitrogenous bases.

