Charting New Horizons in Education

Carbohydrates Archive

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Biochemistry

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Carbohydrates I & II

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- One of the following is incorrect stereoisomer:

A. L-glucose - D-glucose
B. alpha ribose - beta ribose
C. glucose - mannose
D. glucose – fructose
E. galactose - glucose

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- Which one of the following is not stereoisomers:

A. Enantiomers
B. Epimers
C. Conformers
D. Anomers
E. Constitutional

3

- The first type of food that can begin to be digested in the mouth:

A. Carbohydrate
B. Fat
C. Lipid
D. Protein

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- What is the relation between D-glucose and D-fructose?

A. D - glucose and D- fructose are structural (constitutional) isomers
B. D- glucose and D- fructose are enantiomer of each other
C. D- glucose is a disaccharide composed of two D- fructose molecules
D. D- glucose is a polymer made up of repeating D- fructose unit

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- C6H1206 is the molecular formula of all of the following sugars EXCEPT? Select one:

A. Ribose
B. Mannose
C. Galactose
D. Glucose
E. Fructose

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- Enantiomers are one of the followings?

A. Superimposable
B. Not always mirror images
C. Achiral molecules
D. Optically active
E. Pair of constitutional isomers

- Enantiomers are all of the followings EXCEPT?

A. Superimposable
B. mirror images
C. Chiral molecules
D. optically active
E. pair of stereoisomers

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- The bonding of unit molecules to produce a polysaccharide is called:

A. Degradation
B. Hydrolysis
C. cellular respiration
D. Translation
E. condensation

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- Tow sugars have mirror images but cannot be superimposable:

A. Enantiomers
B. Epimers
C. Conformers
D. Anomers

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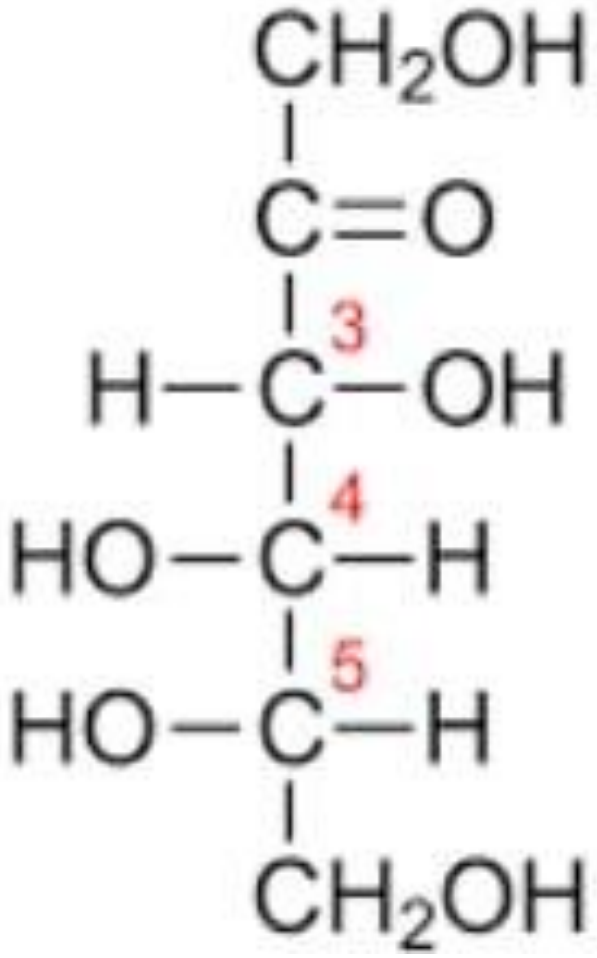
- The sugar is?

A. D-Glucose
B. L-Glucose
C. D-Fructose
D. L-Fructose
E. Ribose?



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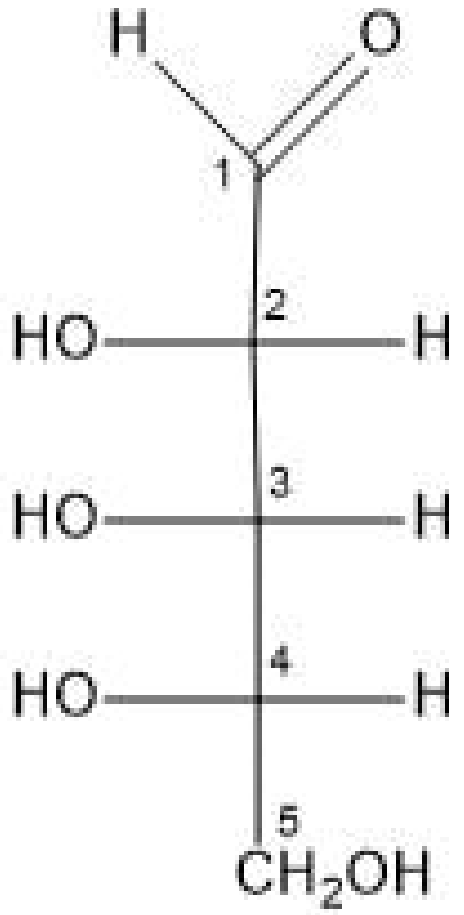
- ((IN THE BELOW PICTURE of ribose)) How much of stereoisomers?

A. 1
B. 2
C. 0
D. 8
E. 16



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- Gluconic acid results from? Select one:

A. oxidation of chiral carbon number 5 of glucose
B. reduction of terminal OH of glucose
C. oxidation of terminal OH of glucose
D. reduction of aldehyde group of glucose
E. oxidation of aldehyde group of glucose

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- If the OH group at ONLY one chiral carbon in the linear structure of monosaccharides is located on the right or the left, then the resulting stereoisomer is assigned as? Select one:

A. a-sugar
B. B-sugar
C. L-sugar
D. L-sugar
E. D-sugar
F. Epimer

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- One of the following compounds is not considered as modified sugar?

A. Glucosamine
B. Glyceraldehyde
C. Deoxyribose
D. Glycerol
E. Glucuronic Acid

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- After the cyclic sugar formation, the carbonyl carbon will be converted to?

A. Ketonic group
B. Carboxylic Acid
C. Achiral carbon
D. Alcoholic carbon
E. Anomeric carbon

Q	A	Q	A
1	D	9	A
2	E	10	D
3	A	11	D
4	A	12	E
5	A	13	F
6	D	14	B
7	A	15	E
8	E		

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Carbohydrates III

1

- Which of the following is not caused by lactose intolerance:

A. Abdominal cramps
B. Nausea
C. Bloating
D. Headache
E. Diarrhea

2

- Which statement accurately describes the structural difference between starch and glycogen?

A. Starch and glycogen exhibit no structural differences.
B. Starch and glycogen have identical linear structures.
C. Starch can be linear, but glycogen is branched Both starch and glycogen are linear in structure.
D. Starch is branched, while glycogen is linear.

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- L-iduronic acid exists in:

A. Keratan
B. Heparin
C. Dermatan
D. Hyaluronic Acid
E. Heparin and dermatan

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- The glucose is the main energy substrate in? Select one:

A. Heart
B. Glucose
C. Liver
D. Muscle
E. Brain

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- One of the following is not correct regarding cellobiose? Select one:

A. The glucose units are joined together by a-1,4 glycosidic bond
B. The monomers in cellobiose are found in the b - configuration and as cyclic pyranose rings
C. It consists of two 8-glucose units
D. This disaccharide results from degradation of cellulose
E. It is a reducing sugar

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- This polysaccharide is hetero, natural, linear and mainly found in mast cells?

A. Glycogen
B. Hyaluronic Acid
C. Dermatan sulfate
D. Heparin
E. Chitin

- Regarding Lactose Intolerance, one of the following is correct?

A. It is caused by deficiency of the sugar lactose in milk
B. It has symptoms like constipation and fever
C. deficiency of lactase enzyme, the lactose will be absorbed from the wall of small intestine intact
D. GIT disturbances are resulted from undegraded lactose reaching the colon intact
E. Small babies are given the milk formula AR

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- Which carbohydrate is found in exoskeleton of insects?

A. Starch
B. Sucrose
C. Chitin
D. Glucose
E. Cellulose

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- Present in the skin?

A. Heparin
B. Chitin
C. Dermatan
D. Hyaluronic acid
E. Dermatan and Hyaluronic acid

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- What is the main component of the synovial fluid?

A. Keratan
B. Dermatan
C. Heparin
D. Hyaluronic acid

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- One of the following is correctly matched:

A. Glucose – Blood sugar
B. Sucrose – milk sugar
C. Maltose – Grape sugar
D. Lactose – Table sugar
E. Fructose – Milk sugar

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- The storage saccharide is most abundant in animal cells:

A. Chitin
B. Cellulose
C. Galactose
D. Starch
E. Glycogen

Q	A	Q	A
1	D	9	E
2	D	10	D
3	E	11	A
4	E	12	E
5	A		
6	D		
7	D		
8	C		

«Wherever the art of medicine is loved,
there is also a love of humanity.»

- Hippocrates-

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