

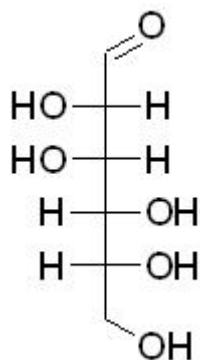
Name: _____

Date: _____

[10 pt] 1. Answer the following questions about the classification of carbohydrates.

- (a) List the terms used to indicate the number of carbons in a carbohydrate, for carbohydrates with 3,4,5 and 6 carbons.
- (b) What is the difference between an aldose and a ketose?
- (c) What is the significance of the D and L notation in the name of a carbohydrate? Draw a picture illustrating the concept.
- (d) The use of (+) or (-) tells us what about a carbohydrate?
- (e) What is the difference between a furanose and a pyranose?

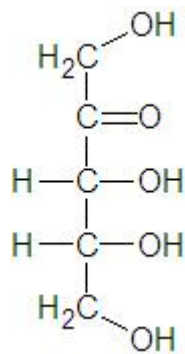
[5 pt] 2. Answer the following questions about the monosaccharide shown here:



- (a) Is it a D or L isomer? 2(a) _____
- (b) Is it a ketose or aldose? 2(b) _____
- (c) Is it a pentose or hexose? 2(c) _____
- (d) Would it form a furanose or pyranose? 2(d) _____
- (e) Name the molecule: 2(e) _____

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[4 pt] 3. Answer the following questions about the monosaccharide shown here:



- | | |
|---|------------|
| (a) Is it a D or L isomer? | 3(a) _____ |
| (b) Is it a ketose or aldose? | 3(b) _____ |
| (c) Is it a pentose or hexose? | 3(c) _____ |
| (d) Would it form a furanose or pyranose? | 3(d) _____ |

[2 pt] 4. Why in the previous two questions, didn't you have to specify whether the carbohydrate was a (+) or (-)?

[3 pt] 5. What is an "epimer"?

[6 pt] 6. Draw all of the epimers of the following carbohydrate (L- Psicose):

