CHEM 2325 Exam 4 Name:

December 9, 2021 UTEP ID #:

If required, the Exam 4 retake homework will be due ***tomorrow***, Friday, December 10, before 5 pm through <http://organic.utep.edu/quiz>, no exceptions or excuses. Expect an email from me this evening. ***Put your name and ID on your scantron, and show your picture ID as you turn it in.***



1. The following compound is 600 times sweeter than sucrose. If all its chlorines were converted to hydroxyl groups, at which carbon would the stereochemistry of this compound vary from that of sucrose?

a. carbon a b. carbon b c. carbon c d. carbon d e. carbon e

1. If all its chlorines were converted to hydroxyl groups, the pyranose ring of the compound in question 1 would be a derivative of?

a. fructose b. galactose c. glucose d. ribose e. not a.-d.

1. Which carbon in the structure of question 1 represents a *beta* glycosidic linkage?

a. carbon a b. carbon b c. carbon c d. carbon d e. carbon e

1. The compound to the right for sure is? a. *l* b. *L* c. *d* d. *D* e. not a.-d.
2. The compound to the right is?

a. erythro b. erythrose c. threo d. threose e. not a.-d.

1. Which compound cannot be synthesized by the Fischer synthesis that we covered in lecture?

a. fructose b. galactose c. glucose d. ribose e. not a.-d.

1. Which compound is the third intermediate in the Ruff degradation?

a.  b.  c.  d.  e. 

1.  Which compound fits the following degradation scheme?

a.  b.  c.  d.  e. not a.-d.

1. Which reagent will react with non-reducing sugars?

a. Ag+ b. Br2 c. Cu++ d. HNO3  e. not a.-d.

1. Which is not an example of epimers?

a. alpha and beta-D-glucofuranose b. D-glucose and galactose

c. D-erythrose and threose d. alpha-maltose and cellobiose e. not a.-d.

1. Which compound is Thr-Ile?

a. b. c. d. e. not a.-d.

12.-14. Match each reaction sequence to a product on the right. Answers may be repeated.

1.  a. isoleucine b. leucine
2.  c. lysine d. valine
3.  e. not a.-d.
4. What is the synthetic sequence to make Ile-Leu?

a.  b. 

c.  d.  e. not a.-d.

1. What is the desired product of the following reaction sequence? 

a.  b.  c.  d.  e. not a.-d.

1. If you mix 10 different alpha-amino acids with DCC, how many different tripeptides will be generated?

a. 10!/3! b. 103 c. 310 d. 10 x 3 e. not a.-d.