CHEM 2325 Exam 2 Name:

July 26, 2023 UTEP ID #:

If required, the Exam 2 retake homework will be due Friday, July 28, before 5 pm through <http://organic.utep.edu/quiz>, no exceptions or excuses. Put your name on these sheets so that you can recover your class answers. Expect an email from me this evening.

1. How many ones are in the adjacency matrix of the following compound? 

a. 8 b. 10 c. 12 d. 14 e. not a.-d.

1. 1-bromo-4-fluorobuta-1,2,3-triene can be?

a. *e or z* b. *E or Z* c. *r or s* d. *R or S* e. not a.-d.

1. Which compound gives off the least heat if hydrogenated to cyclopentylpropane?

a.  b.  c.  d.  e. 

1. What is the major product of the following reaction? Chiral products are racemic.

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

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7.-11. Classify the following as: a. aromatic b. anti-aromatic c. non-aromatic d. not a.-c. (Answers may be repeated.)

1.  8.  9.  10.  11. 
2. Complete the fifth resonance structure to determine which bond is longest in the following compound?

     e. not a-d.

1. At which position will (CH3)3CCl/AlCl3 substitute the most with the following compound?
2. What is the product of the following reaction? 

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

1. The intermediate of which reagents can undergo a Diels-Alder reaction?

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

16.-20. Starting with benzene, match each reaction sequence to a major product on the right.

1. /HF, Br2/FeBr3 a. 
2. Br2/FeBr3,/ AlCl3, H2NNH2/KOH/heat b. 
3. / AlCl3, Zn/HCl, H2SO4, Br2/FeBr3, H2O c. 
4. / AlCl3, Br2/FeBr3, HS(CH2)3SH/H+, H2/Ni d. 
5. HNO3/H2SO4, /AlCl3, H2/Pd, NaNO2/HCl/cold, CuBr e. not a.-d.