CHEM 2311 Organic Chemistry: Isomerism

1. What is isomerism?
a. The study of atoms and molecules
b. The study of the physical and chemical properties of matter
c. The study of the arrangement of atoms in molecules
d. The study of the way atoms bond to form molecules

2. Which of the following is NOT an isomer?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

3. Which of the following is an example of constitutional isomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

4. Which of the following is an example of stereoisomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

5. Which of the following is an example of cis-trans isomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

6. Which of the following is an example of enantiomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

7. Which of the following is an example of diastereomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

8. Which of the following is an example of conformational isomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

9. Which of the following is an example of metamerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane
d. Propane and propene

10. Which of the following is an example of tautomerism?
a. Ethanol and dimethyl ether
b. Butane and isobutane
c. Pentane and isopentane

d. Propane and propene

Answer Key:
1. c
2. d
3. b
4. c
5. d
6. b
7. c
8. d
9. b
10. c