

Chemistry 351

Quiz #6

October 17, 2018

Name: _____

Student Number: _____

Section Number: _____

TA: _____

INSTRUCTIONS:

This quiz consists of 10 questions on 3 pages. Please make certain that your quiz is complete.

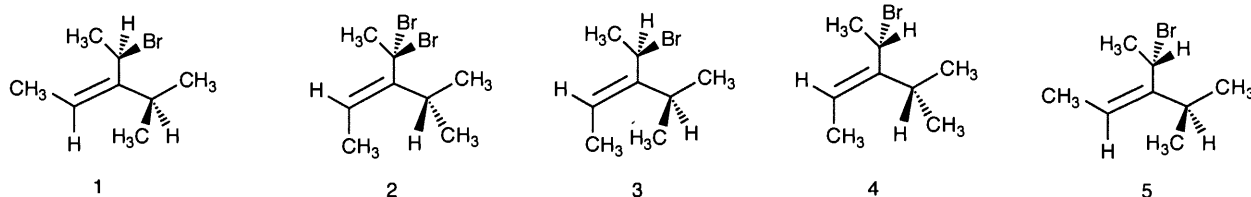
Write your name, student number, and section number **on both the quiz and answer sheet. Be certain to bubble in your PID digits on the answer sheet. The absence of any of these identification items will result in the deduction of 2 points from your score.**

Questions 1 - 10 are each worth 1 point.

Write your answers to Questions 1-10 on the enclosed answer sheet.

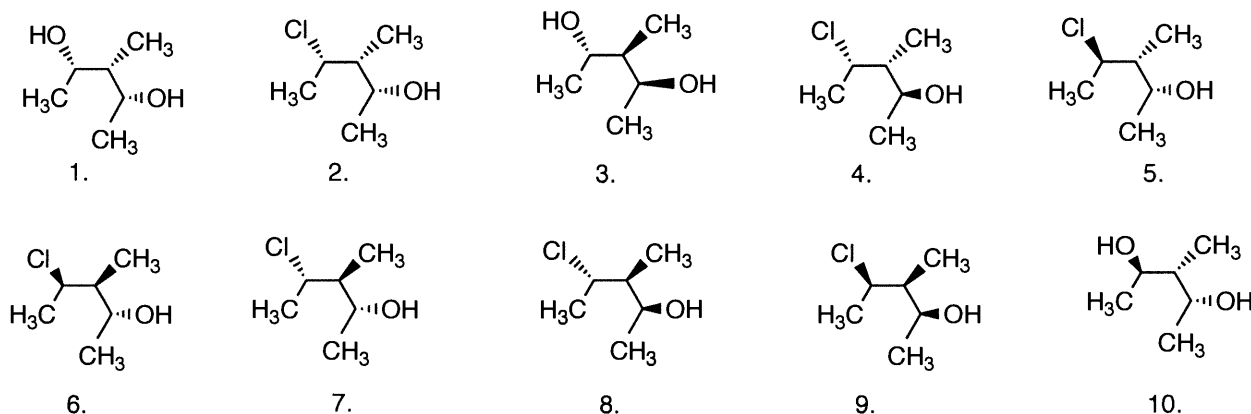
When you complete the quiz, insert your answer sheet into your quiz and then hand both in on the bench in front of the lecture hall in the spot indicated by your section number.

Questions 1-4 are to be answered from the following possibilities:



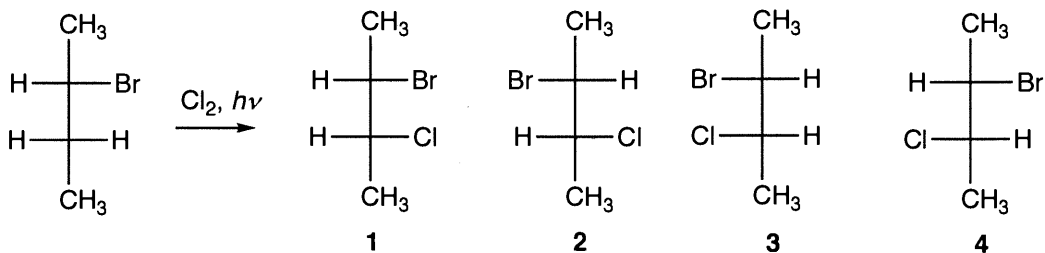
- Identify the molecule that is the enantiomer of molecule 1.
 - 1
 - 2
 - 3
 - 4
 - 5
- Identify the molecule that will not rotate plane-polarized light.
 - 1
 - 2
 - 3
 - 4
 - 5
- Identify the molecule that has an *R* stereogenic center and a *Z* double bond.
 - 1
 - 2
 - 3
 - 4
 - 5
- Identify the molecule that has an *S* stereogenic center and a *E* double bond.
 - 1
 - 2
 - 3
 - 4
 - 5

Questions 5-8 refer to the following molecules:



- If molecule 8 has a $[\alpha] = +5.67$, which molecule has $[\alpha] = -5.67$?
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
- Identify the molecule that is superimposable on its mirror image:
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
- Identify the molecule that when mixed with an equimolar amount of 6 leads to a solution that will not rotate plane-polarized light:
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
- Identify which of the following molecules will have different boiling points:
 - 3 and 10
 - 2 and 9
 - 1 and 3
 - 4 and 6
 - 5 and 8

9. In the photolytic chlorination of 2-bromobutane, identify which one of the following stereochemical relationships is correct:



- a. 1 is an enantiomer of 2 b. 2 is an enantiomer of 3 c. 1 is an enantiomer of 3
d. 3 is an enantiomer of 4 e. 1 is an enantiomer of 4 f. 2 is a diastereomer of 4

10. Identify which of the following stereoisomer structures corresponds to *2Z,4E*-hexa-2,4-diene-1,3,6-tricarboxylic acid:

