Unit 10 - Week 8

Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-25, 23:59 IST.

1) *1 point*

In an asymmetric reaction, the competing reactions go through enantiomeric transition states.

a. True
b. False

a.
b.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

2) *1 point*

In an enantioselective reaction, the specific rotation of the intended enantiomer was found to be +35. The pure enantiomer has a specific rotation +50 under the same conditions. The *ee* of the reaction was

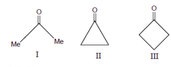
a. 85%
b. 70%
c. 30%

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

3) *1 point*

The relative rates of $NaBH_4$ reduction of the following ketones follows the order



I II III

a. I>II>III
b. II>III>I
c. II>I>III

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

4) *1 point*

The energy difference between the preferred conformations of *cis* and *trans*-1,2-dimethylcyclohexane is

a. 2.7 kcal/mole
b. 1.8 kcal/mole
c. 3.6 kcal/mol/e

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

5) *1 point*

The addition of bromine to trans-hex-3-ene is an example of stereospecific reaction.

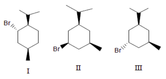
a. True
b. False

a.
b.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

6) *1 point*

Which one of the following will undergo fastest base induced E2- elimination ?



I II III

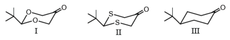
a. I
b. II
c. III

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.

7) *1 point*

The following molecules are separately reduced with $NaBH_4$. Which one will give highest percentage of axial alcohol as per Cieplak model?



I II III

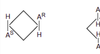
a. I
b. II
c. III

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

8) *1 point*

The relationship between the molecules is



a. Enantiomers
b. Diastereomers
c. Constitutional Isomers
d. Homomers

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

9) *1 point*

An S_N2 reaction at a chiral centre with dextro-rotatory molecule always produces a product which is levo-rotatory

a. True
b. False

a.
b.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

10) *1 point*

Which of the following statements regarding chair cyclohexane is **INCORRECT**?

a. The dihedral angle of the two axial bonds on adjacent carbons is 180°.
b. The dihedral angle of the two equatorial bonds on adjacent carbons is 180°.
c. The dihedral angle between the axial bond and the equatorial bond on adjacent carbons is 60°.

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

11) *1 point*

In the Fischer projection formula of a molecule with more than one chiral centre, interchange of the position of two groups leads to

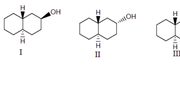
a. same molecule
b. a diastereomer
c. its enantiomer

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
b.

12) *1 point*

Which one of the following has highest rate of oxidation by chromic acid?



I II III

a. I
b. II
c. III

a.
b.
c.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.