



Unit 6 - Week 4

Assignment 4

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

Due on 2019-08-28, 23:59 IST.

1) For a molecule with more than one conformer, the conformers lie at the minima of the energy vs dihedral angle diagram (Statement A) and interconversion of various conformers needs covalent bond breakage (Statement B) 1 point

- a) Statement A and B are both correct
b) Statement A is correct but statement B is wrong
c) Statement A is wrong but statement B is correct

- a)
 b)
 c)

No, the answer is incorrect.
Score: 0

Accepted Answers:
b)

2) For cyclohexane C_6H_{12} , the twist boat form is less stable than the boat form. 1 point

- a) True
b) False

- a)
 b)

No, the answer is incorrect.
Score: 0

Accepted Answers:
b)

3) Which statement about different stereoisomers of stilbene dichloride is correct? 1 point

- a) *meso*-Stilbene dichloride has higher dipole moment than its *d* or *l* isomer.
b) The preferred conformation of *meso*-stilbene dichloride is more stable than that of the *d* or *l*-isomer.
c) *meso*-Stilbene dichloride does not possess any stereogenic centre.

- a)
 b)
 c)

No, the answer is incorrect.
Score: 0

Accepted Answers:
b)

4) Heat of combustion per methylene follows the order: 1 point

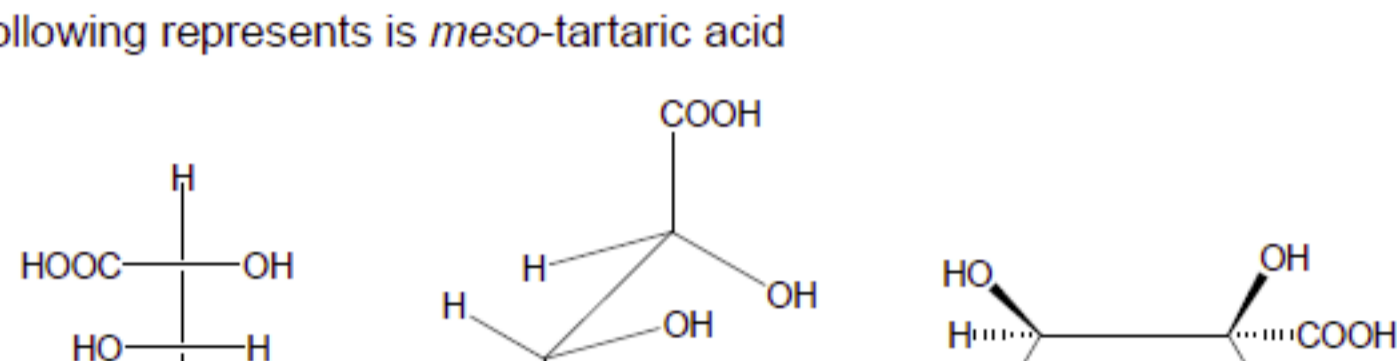
- a) Cyclopropane>cyclobutane>n-butane
b) Cyclobutane>cyclopropane>n-butane
c) n-Butane>cyclobutane>cyclopropane
d) Cyclopropane>n-butane>cyclobutane

- a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0

Accepted Answers:
a)

5) Which of the following represents is *meso*-tartaric acid 1 point



- a) I
b) II
c) III

- a)
 b)
 c)

No, the answer is incorrect.
Score: 0

Accepted Answers:
a)

6) The number of gauche butane interaction(s) in the most stable conformation of 2,3-dimethyl butane is 1 point

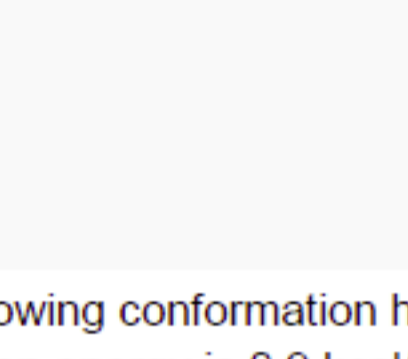
- a) 1
b) 2
c) 3
d) 4

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:
b.

7) The excess energy that the following conformation has over most stable conformer of n-butane is (one gauche butane interaction energy is 0.9 kcal/mol) 1 point



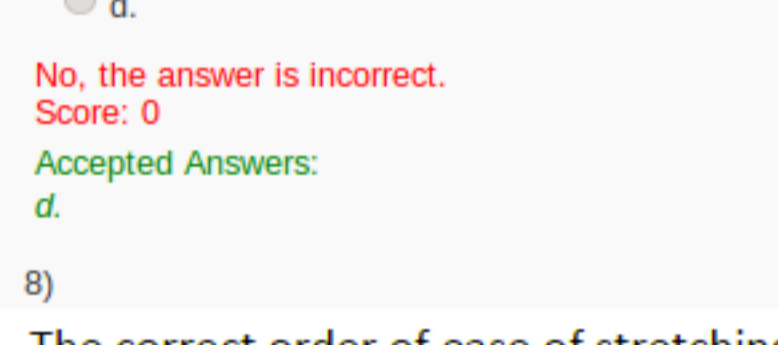
- a) 0.9 kcal/mol
b) 1.8 kcal/mol
c) 3.6 kcal/mol
d) 5.4 kcal/mol

- a.
 b.
 c.
 d.

No, the answer is incorrect.
Score: 0

Accepted Answers:
d.

8) The correct order of ease of stretching of "C=O" bond in the following molecules is 1 point



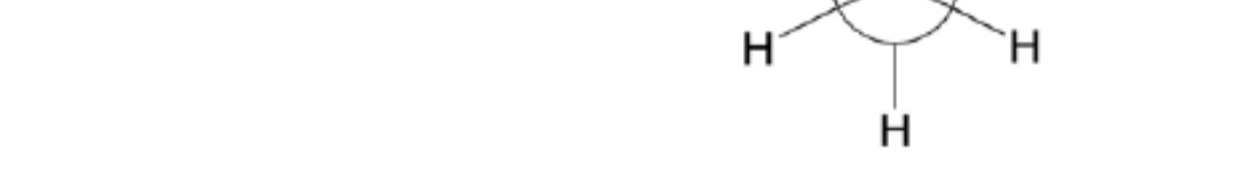
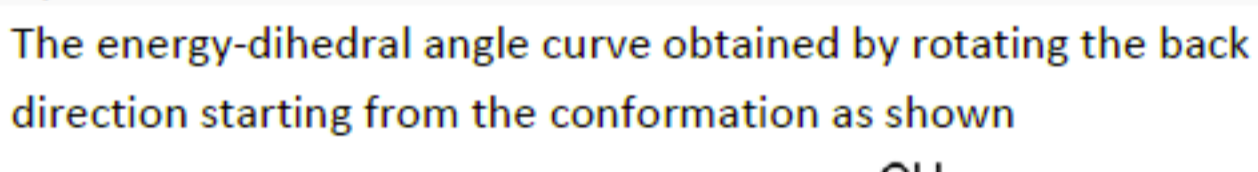
- a) I > II > III
b) II > I > III
c) II > III > I
d) III > II > I

- a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0

Accepted Answers:
c)

9) The energy-dihedral angle curve obtained by rotating the back carbon by 360° in a clockwise direction starting from the conformation as shown 1 point

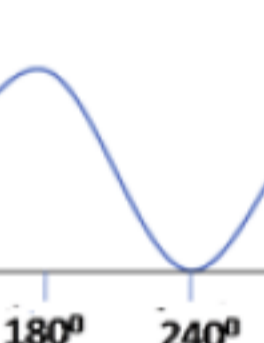


- a)
 b)
 c)

No, the answer is incorrect.
Score: 0

Accepted Answers:
a)

10) In the preferred conformation of X 1 point



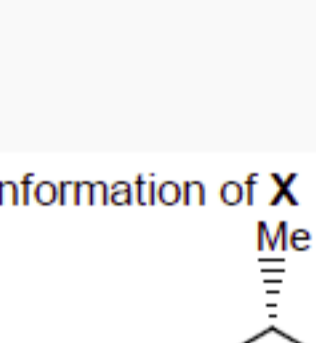
- a) Both the methyl groups are equatorial
b) Only one methyl group equatorial
c) Both the methyl groups are axial

- a)
 b)
 c)

No, the answer is incorrect.
Score: 0

Accepted Answers:
b)

11) The C-3 carbon in the following molecule is 1 point



- a) Chirotopic and stereogenic
b) Achirotopic and stereogenic
c) Achirotopic and non-stereogenic
d) Chirotopic and non-stereogenic

- a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0

Accepted Answers:
a)

12) The maximum number of stereoisomers that will be obtained by photochemical mono bromination of but-1-ene with N-bromo succinimide is 1 point

- a) 1
b) 2
c) 3
d) 4

- a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0

Accepted Answers:
d)

Course outline

How to access the portal

Week 0 Assignment 0

Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Download Videos

TRANSCRIPTS

Assignment Solution

Week 4

Week 5

Week 6

Week 7

Week 8

Week 4

Week 5

Week 6

Week 7

Week 8

Week 4

Week 5

Week 6

Week 7

Week 8

Week 4

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