

Unit 3 - Week 1

Assignment 1

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

Due on 2019-08-14, 23:59 IST.

1) Different compounds with same molecular formula and same bond connectivity are called 1 point

- a) Configurational isomers
- b) Constitutional isomers
- c) Rotamers
- d) Homomers

- a)
- b)
- c)
- d)

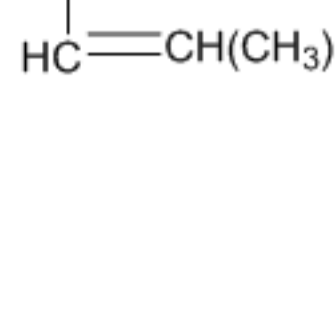
No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

2) How many stereoisomers are possible for the following structure? 1 point



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

- a)
- b)
- c)
- d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

3) Which one of the following statements is INCORRECT 1 point

- a) An asymmetric molecule is always dissymmetric
- b) An asymmetric molecule is always chiral
- c) A dissymmetric molecule is always asymmetric
- d) A dissymmetric molecule is always chiral

- a)
- b)
- c)
- d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

4) A compound with a C_2 axis is always 1 point

- a) Achiral
- b) Chiral
- c) Can't be predicted

- a)
- b)
- c)

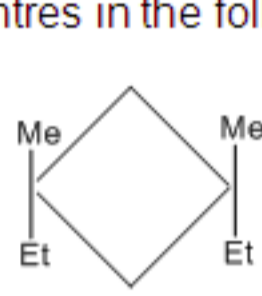
No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

5) The number of stereogenic centres in the following molecule is 1 point



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

- a)
- b)
- c)
- d)

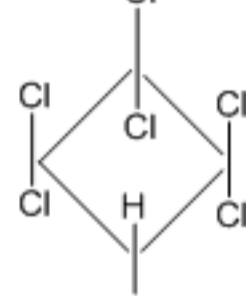
No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

6) The following molecule has 1 point



- a) One S_1 axis
- b) Two S_1 axis
- c) Three S_1 axis
- d) Four S_1 axis

- a)
- b)
- c)
- d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

7) 1 point

A certain amount (x gm) of an optically pure compound, dissolved in 10 mL of methanol, shows a rotation of $+50^\circ$ using a cell of path length 100 mm and cell volume 2 mL. The specific rotation of the compound in the same solvent under similar conditions (wavelength and temperature) is $+100^\circ$. The value of x is

- a) 1.25
- b) 2.5
- c) 5
- d) 10

- a)
- b)
- c)
- d)

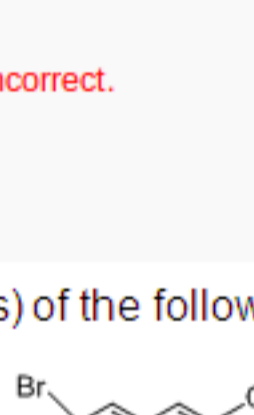
No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

8) Which one(s) of the following molecules exhibit chirality? 1 point



- a) I and II
- b) Only II
- c) Only III
- d) I and II

- a)
- b)
- c)
- d)

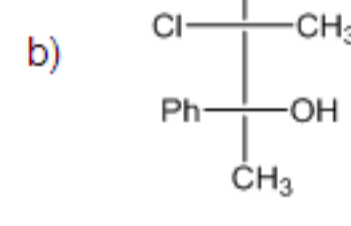
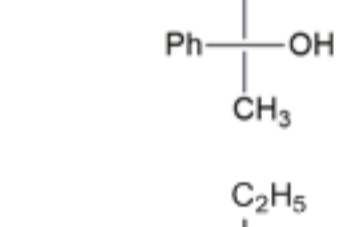
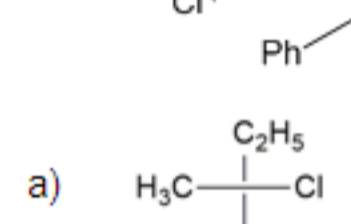
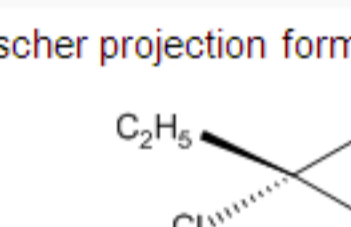
No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

9) The correct Fischer projection formula of the following molecule is 1 point



- a)
- b)
- c)
- d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

10) 1 point

An optically pure compound of specific rotation $(+)$ 100 is mixed with 20% of its enantiomer. The specific rotation of the mixture under the same condition will be

- a) $(+)$ 80
- b) $(+)$ 60
- c) $(+)$ 40
- d) $(+)$ 20

- a)
- b)
- c)
- d)

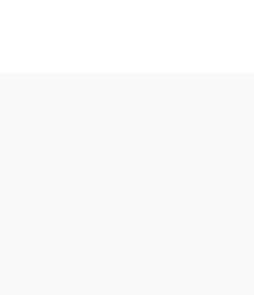
No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

11) The number of planes of symmetry present in the following molecule is 1 point



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

- a)
- b)
- c)
- d)

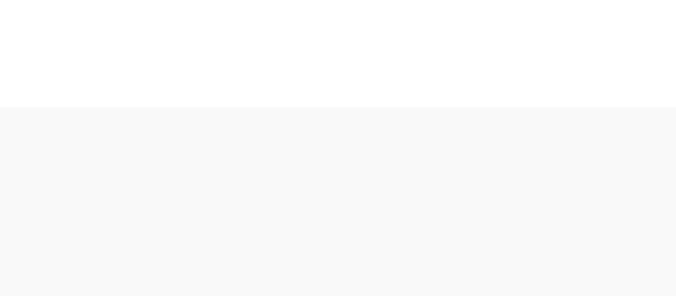
No, the answer is incorrect.

Score: 0

Accepted Answers:

b)

12) The relationship between the molecules A and B is 1 point



- a) Enantiomer
- b) Diastereomer
- c) Homomer
- d) Conformational isomer

- a)
- b)
- c)
- d)

No, the answer is incorrect.

Score: 0

Accepted Answers:

a)

13) A compound can be meso only when it has 1 point

- a) even number of tetrahedral stereogenic centre (chirality centre).
- b) odd number of tetrahedral stereogenic centre (chirality centre)
- c) S_n axis in spite of having tetrahedral stereogenic centres (chirality centre)

- a)
- b)
- c)

No, the answer is incorrect.

Score: 0

Accepted Answers:

c)

14) The number of acyclic isomers possible for a compound with molecular formula $\text{C}_3\text{H}_2\text{BrCl}$ 1 point

- a) 2
- b) 3
- c) 4
- d) 7

- 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

- Lecture 1 : Constitution and Configuration
- Lecture 2 : Chirality, Symmetry Elements
- Lecture 3 : Optical Rotation and Specific Rotation Calculation
- Lecture 4 : Projection Formulæ and rules for drawing

- Quiz : Assignment 1
- Feedback for Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

Download Videos

TRANSCRIPTS

Assignment Solution