



CHEMISTRY

NCERT - NCERT CHEMISTRY(GUJRATI)

ISOMERISM IN ORGANIC CHEMISTRY

Self Evaluation Choose The Correct Answer

1. Identify chiral molecule among the following :

A. isopropyl alcohol

B. isobutyl alcohol

C. 2-pentanol

D. 1-bromo-3-butene

Answer: B



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2. Which among the following is not having an asymmetric carbon atom ?

- A. 2-chloro butane
- B. 2-bromo-3-butene
- C. 2-hydroxy propanal
- D. isobutyric acid

Answer: D



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3. Which among the following can be a chiral center ?

- A. C^+ of a carbocation
- B. carbon of a radical
- C. an sp^2 carbon

D. an sp^3 carbon

Answer: D

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4. Give the structural formulae for the simplest chiral

- (a) alkane (b) alkene (c) alkyne (d) alcohol
(e) aldehyde (f) ketone (g) carboxylic acid (h) amine

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Self Evaluation Geometrical Isomerism

1. Which among the following exhibit geometrical isomerism ?

A. isobutyraldehyde

B. 1-butene

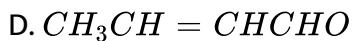
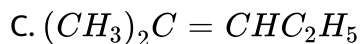
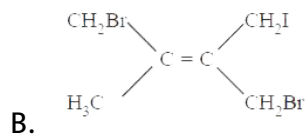
C. 1,1-dichloro ethylene

D. 1-chloro-2-bromo ethylene

Answer: D

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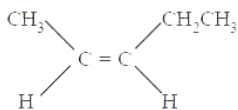
2. Which among the following does not exhibit geometrical isomerism ?



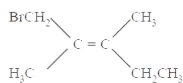
Answer: C

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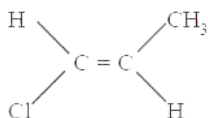
3. Give E/Z-designation for



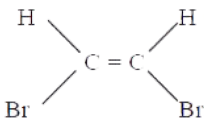
A.



B.



C.



D.

Answer: A



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4. Arrange the following in the increasing order of stability.

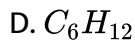
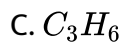
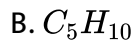
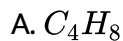




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5. How many linear chain isomers are possible for each of the following olefins ?

Practice Questions



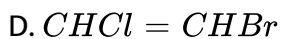
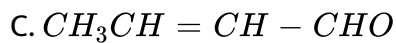
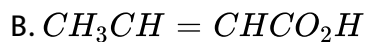
Answer:



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Self Evaluation Geometrical Isomerism Practice Question

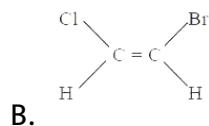
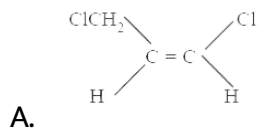
1. Draw the cis, trans isomers for the following and designate them as E or Z.

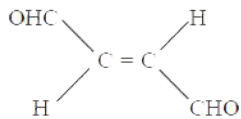


Answer: D

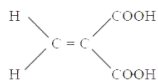
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2. Identify each of the following alkenes as being either cis or trans.





C.

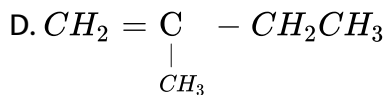
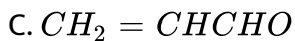
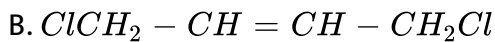
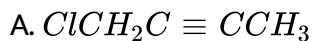


D.

Answer:

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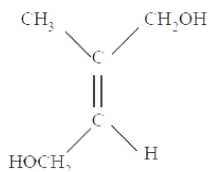
3. Which of the following can exist as geometric isomers ?



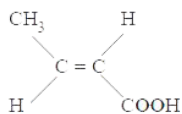
Answer:

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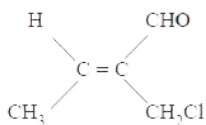
4. Label the following as, E, Z isomers.



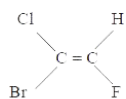
A.



B.



C.



D.

Answer:



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5. Give the structure of Z and E forms of cinnamic acid.

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Self Evaluation Conformation

1. Which of the following can have different conformations ?



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2. The eclipsed form of which of the following has the highest energy.

Ethane, propane, n-butane, ethylene dibromide.

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