

Chapter 2 - Alkanes and Cycloalkanes: Introduction to Hydrocarbons (Test Bank) KEY

1. Alkanes are characterized by the general molecular formula:

- A. $\text{C}_n\text{H}_{2n-2}$
- B. C_nH_{2n}
- C. $\text{C}_n\text{H}_{2n+2}$**
- D. $\text{C}_n\text{H}_{2n+4}$

Accessibility: Keyboard Navigation
Bloom's Level: 1. Remember
Chapter: 02
Difficulty: Easy
Gradable: automatic
Section: 02.05
Subtopic: Acyclic vs cyclic
Subtopic: Alkanes
Subtopic: Hydrocarbons
Topic: Alkanes (Acyclic and Cyclic)
Topic: Functional Groups

2. Cycloalkanes are characterized by the general molecular formula:

- A. $\text{C}_n\text{H}_{2n-2}$
- B. C_nH_{2n}**
- C. $\text{C}_n\text{H}_{2n+2}$
- D. $\text{C}_n\text{H}_{2n+4}$

Accessibility: Keyboard Navigation
Bloom's Level: 1. Remember
Chapter: 02
Difficulty: Easy
Gradable: automatic
Section: 02.18
Subtopic: Acyclic vs cyclic
Subtopic: Alkanes
Subtopic: Hydrocarbons
Topic: Alkanes (Acyclic and Cyclic)
Topic: Functional Groups

3. The carbon-carbon sigma bond in ethane is formed by overlap of which two orbitals?

- A. 2p-2p
- B. sp-sp
- C. sp^2-sp^2
- D. sp^3-sp^3

Accessibility: Keyboard Navigation

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

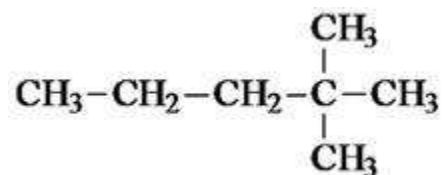
Gradable: automatic

Section: 02.07

Subtopic: Hybridization

Topic: Molecular Shape

4. What is the IUPAC name of the following compound?



- A. 4,4-dimethylpentane
- B. 1-tert-butylpropane
- C. 2,2-dimethylpentane
- D. 1,1,1-trimethylbutane

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

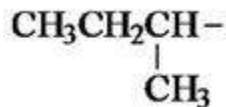
Gradable: automatic

Section: 02.17

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

5. The correct IUPAC name of the following compound is



- A. 2-ethyl-3,5-dimethylheptane.
- B. 6-ethyl-5,5-dimethylheptane.
- C. 3,4,4-trimethyloctane.**
- D. 5,5,6-trimethyloctane.

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

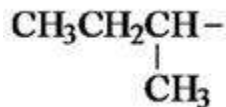
Gradable: automatic

Section: 02.17

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

6. The common name of the following group is



- A. *n*-butyl
- B. sec-butyl**
- C. isobutyl
- D. *tert*-butyl

Bloom's Level: 1. Remember

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.16

Subtopic: Alkyl groups

Topic: Alkanes (Acyclic and Cyclic)

7. Which one of the following is 2,2,5-trimethylhexane?

- A. $(\text{CH}_3)_2\text{CHCH}_2\text{C}(\text{CH}_3)_3$
B. $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_2\text{C}(\text{CH}_3)_3$
C. $\text{CH}_3\text{CH}_2\text{CH}(\text{CH}_3)\text{C}(\text{CH}_3)_3$
D. $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_2\text{CH}_2\text{C}(\text{CH}_3)_3$

Accessibility: Keyboard Navigation

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

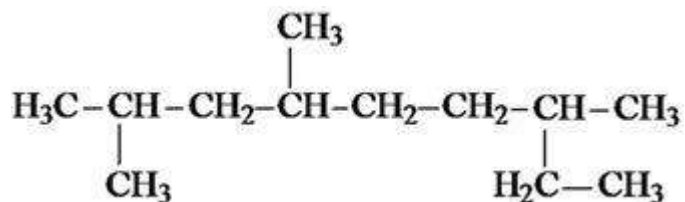
Gradable: automatic

Section: 02.17

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

8. The correct IUPAC name of the following is



- A. 2,4,7-trimethylnonane.
B. 7-ethyl-2,4-dimethyloctane.
C. 3,6,8-trimethylnonane.
D. 2-ethyl-5,7-dimethyloctane.

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

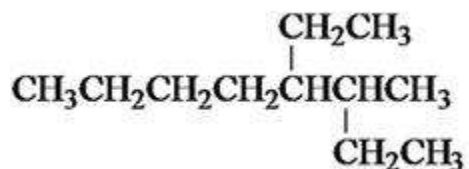
Gradable: automatic

Section: 02.17

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

9. What is the IUPAC name of the following?



- A. 5,6-diethylhexane
- B. 5-ethyl-6-methylheptane
- C. 2,3-diethylhexane
- D. 4-ethyl-3-methylheptane

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.17

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

10. What is the IUPAC name of the following?



- A. 1-ethyl-4,4-dimethylcyclopentane
- B. 1-ethyl-3,3-dimethylcyclopentane
- C. 3-ethyl-1,1-dimethylcyclopentane**
- D. 4-ethyl-1,1-dimethylcyclopentane

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.18

Subtopic: IUPAC Nomenclature of cycloalkanes

Topic: Alkanes (Acyclic and Cyclic)

11. Cyclohexane is composed of

- A. methine groups.
- B. methylene groups.**
- C. methyl groups.
- D. both methine and methylene groups.

Accessibility: Keyboard Navigation

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.11

Subtopic: IUPAC Nomenclature of cycloalkanes

Topic: Alkanes (Acyclic and Cyclic)

12. All the carbons in cyclopentane are

- A. primary carbons.
- B. secondary carbons.**
- C. tertiary carbons.
- D. quaternary carbons.

Accessibility: Keyboard Navigation

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

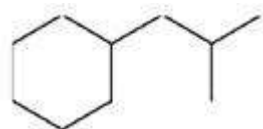
Gradable: automatic

Section: 02.16

Subtopic: IUPAC Nomenclature of cycloalkanes

Topic: Alkanes (Acyclic and Cyclic)

13. The correct name of the following compound is



- A. (1-methylpropyl)cyclohexane.
- B. (2,2-dimethylpropyl)cyclohexane.**
- C. (2,2-dimethylethyl)cyclohexane.
- D. (2,2-dimethylpropyl)cyclohexane.

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

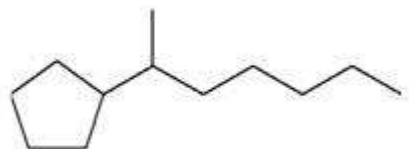
Gradable: automatic

Section: 02.18

Subtopic: IUPAC Nomenclature of cycloalkanes

Topic: Alkanes (Acyclic and Cyclic)

14. The correct IUPAC name of the following compound is



- A. (1-methylhexyl)cyclopentane.
- B. (1-pentylethyl)cyclopentane.
- C. 2-cyclopentylheptane.**
- D. 1-cyclopentyl-2-heptane.

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.18

Subtopic: IUPAC Nomenclature of cycloalkanes

Topic: Alkanes (Acyclic and Cyclic)

15. The C-C sigma bond in acetylene is formed by the overlap of which two orbitals?



- A. 2p-2p
- B. sp^2-sp^2**
- C. sp^3-sp^3
- D. $sp-sp$

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.09

Subtopic: Hybridization

Topic: Molecular Shape

16. The boiling point of isobutane (-10.2 °C) is lower than *n*-butane (-0.4 °C) because isobutane has

- A. weaker intermolecular van der Waals forces.
- B. stronger intermolecular van der Waals forces.
- C. weaker dipole-dipole attractive forces.
- D. stronger dipole-dipole attractive forces.

Accessibility: Keyboard Navigation

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.21

Subtopic: Intermolecular forces

Topic: Functional Groups

17. Which of the following describes an atom or group of atoms that has similar chemical properties when it occurs in different compounds?

- A. hydrocarbon
- B. functional group**
- C. paraffin
- D. isomer

Accessibility: Keyboard Navigation

Bloom's Level: 1. Remember

Chapter: 02

Difficulty: Easy

Gradable: automatic

Section: 02.19

Subtopic: C-Z functional groups (Z = N, O, S, halogen)

Subtopic: Hydrocarbons

Topic: Functional Groups

18. Arrange the following isomeric alkanes in order of increasing boiling point.

I. *n*-heptane

II. 2,3-dimethylpentane

III. 2,2,3-trimethylbutane

- A. I < II < III
- B. II < III < I
- C. III < I < II
- D. III < II < I

Accessibility: Keyboard Navigation
Bloom's Level: 4. Analyze
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.21
Subtopic: Intermolecular forces
Topic: Functional Groups

19. The oxidation states of carbon range from

- A. 0 to +2.
- B. 0 to +4.
- C. -4 to 0.
- D. -4 to +4.

Accessibility: Keyboard Navigation
Bloom's Level: 1. Remember
Chapter: 02
Difficulty: Easy
Gradable: automatic
Section: 02.23
Subtopic: Acyclic vs cyclic
Topic: Alkanes (Acyclic and Cyclic)

20. Which of the following has (have) a higher oxidation state of carbon than the carbon in formaldehyde, $\text{H}_2\text{C}=\text{O}$?

I. CH_3OH

II. HCO_2H

III. H_2CO_3

- A. I
- B. III
- C. II and III
- D. I, II, and III

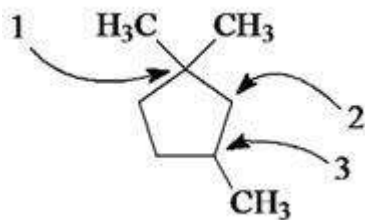
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Bloom's Level: 4. Analyze
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.23
Subtopic: Acyclic vs cyclic
Topic: Alkanes (Acyclic and Cyclic)

21. The *tert*-butyl group can also be called

- A. 1,1-dimethylpropyl.
- B. 1,1-dimethylethyl.**
- C. 2,2-dimethylpropyl.
- D. 2,2-dimethylethyl.

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.16
Subtopic: Alkyl groups
Topic: Alkanes (Acyclic and Cyclic)

22. Carbon atoms 1, 2, and 3 in the following structure are classified, respectively, as



- A. tertiary, primary, secondary.
- B. quaternary, secondary, secondary.
- C. quaternary, primary, tertiary.
- D. quaternary, secondary, tertiary.

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.16

Subtopic: Alkyl groups

Topic: Alkanes (Acyclic and Cyclic)

23. Identify the isomer of C₆H₁₄ that only has primary and tertiary carbons.

- A. hexane
- B. 2,2-dimethylbutane
- C. 3-methylpentane
- D. 2,3-dimethylbutane

Accessibility: Keyboard Navigation

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Hard

Gradable: automatic

Section: 02.16

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

24. Why can heats of combustion of constitutional isomers of hydrocarbons be used to measure their stabilities?

- I. Combustion of constitutional isomers gives different final states.**
- II. Combustion of constitutional isomers gives the same final states.**
- III. Constitutional isomers of hydrocarbons have the same potential energies.**
- IV. Constitutional isomers of hydrocarbons have different potential energies.**

- A. only I
- B. only II
- C. I and III
- D. II and IV

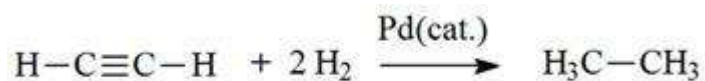
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Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.22
Subtopic: Reactions of alkanes
Topic: Alkanes (Acyclic and Cyclic)

25. The heats of combustion ($-\Delta H^\circ$) of heptane and 3,3-dimethylpentane are 4,817 and 4,809 kJ/mol, respectively. Which statement is true?

- A. Heptane is 8 kJ/mol more stable than 3,3-dimethylpentane.
- B. 3,3-Dimethylpentane is 8 kJ/mol more stable than heptane.
- C. Stabilities cannot be compared since they are not isomers.
- D. Stabilities cannot be compared since they give different combustion products.

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.22
Subtopic: Reactions of alkanes
Topic: Alkanes (Acyclic and Cyclic)

26. The reaction of acetylene with hydrogen gas is shown below. Which statements are true concerning the reaction?



- I. Acetylene is oxidized to ethane.
- II. Acetylene is reduced to ethane.
- III. Carbon changes oxidation state from -1 to -3.
- IV. Hydrogen (from H₂) changes oxidation state from 0 to +1.

- A. I and III
- B. II and IV
- C. I, III, and IV
- D. II, III, and IV

Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.23
Subtopic: Reactions of alkanes
Topic: Alkanes (Acyclic and Cyclic)

27. How many methine groups are there in isopropylcyclopentane?

- A. one
- B. two
- C. three
- D. four

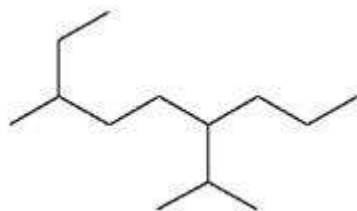
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Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.11
Subtopic: IUPAC Nomenclature of acyclic alkanes
Topic: Alkanes (Acyclic and Cyclic)

28. What is the total number of constitutional isomers with the formula C_5H_{12} ?

- A. two
- B. three
- C. four
- D. five

Accessibility: Keyboard Navigation
Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.13
Subtopic: Constitutional isomers
Topic: Drawing Organic Molecules

29. What is the IUPAC name of the following?



- A. 6-isopropyl-3-methylnonane
- B. 2-ethyl-5-isopropyloctane
- C. 6-propyl-3-methylnonane
- D. 2-ethyl-5-propyloctane

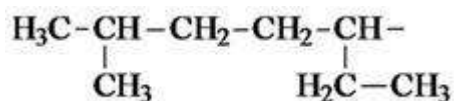
Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.17
Subtopic: IUPAC Nomenclature of acyclic alkanes
Topic: Alkanes (Acyclic and Cyclic)

30. How many moles of O₂ gas would be consumed in the complete combustion of 0.100 mole of C₅H₁₂?

- A. 0.100 mole O₂
- B. 0.400 mole O₂
- C. 0.800 mole O₂
- D. 1.60 mole O₂

Accessibility: Keyboard Navigation
Bloom's Level: 4. Analyze
Chapter: 02
Difficulty: Hard
Gradable: automatic
Section: 02.22
Subtopic: Reactions of alkanes
Topic: Alkanes (Acyclic and Cyclic)

31. The systematic name of the following group is



- A. 5-ethyl-2-methylpentyl.
- B.** 1-ethyl-4-methylpentyl.
- C. 6-methyl-3-heptyl.
- D. 2-methyl-5-heptyl.

Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.16
Subtopic: Alkyl groups
Topic: Alkanes (Acyclic and Cyclic)

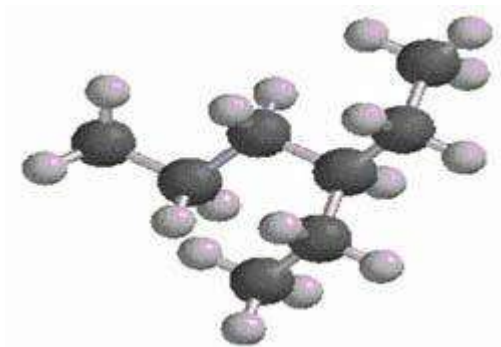
32. What is the relationship between the two structures below?



- A. identical structures
- B. resonance forms
- C. constitutional isomers
- D. different compounds with different compositions

Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.11
Subtopic: Constitutional isomers
Topic: Drawing Organic Molecules

33. What is the IUPAC name of the following structure?



- A. 3-propylpentane
- B. 3-ethylhexane
- C. 2-ethylheptane
- D. 4-ethylpentane

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.17

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

34. Which of the following are constitutional isomers?

I. 2,3,3-dimethylhexane

II. 2,2-diethylpentane

III. 3-ethyl-2-methylheptane

- A. I and II
- B. I and III
- C. II and III
- D. they are all constitutional isomers

Accessibility: Keyboard Navigation

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.11

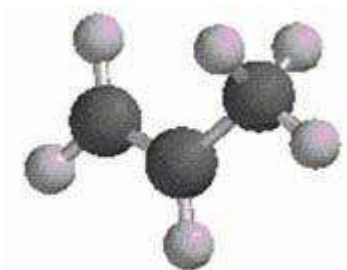
Subtopic: Constitutional isomers

Subtopic: IUPAC Nomenclature of acyclic alkanes

Topic: Alkanes (Acyclic and Cyclic)

Topic: Drawing Organic Molecules

35. What is the estimated C-C-C bond angle in the following model?



- A. 90°
- B. 109.5°
- C. 120°
- D. 180°

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

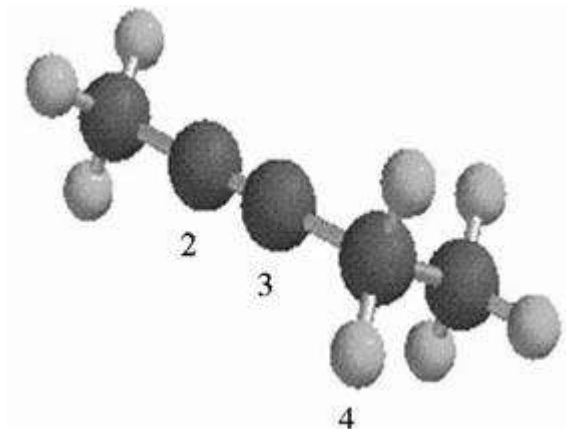
Gradable: automatic

Section: 02.08

Subtopic: Hybridization

Topic: Molecular Shape

36. What are the hybridizations of carbon atoms 2, 3, and 4 shown in the model below?



- A. sp , sp^2 , sp^2
- B. sp , sp^2 , sp^3
- C. sp , sp , sp^2
- D. sp , sp , sp^3

Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.09
Subtopic: Hybridization
Topic: Molecular Shape

37. Arrange the following hydrocarbons in order of increasing boiling point.

I. pentane

II. 2,2-dimethylpropane

III. 2-methylbutane

- A. I < II < III
- B. I < III < II
- C. II < I < III
- D. II < III < I

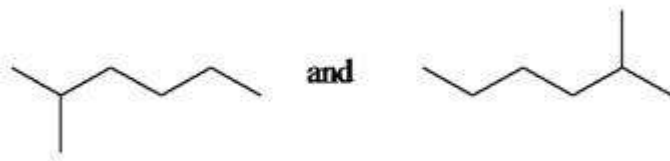
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Bloom's Level: 4. Analyze
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.21
Subtopic: Intermolecular forces
Topic: Functional Groups

38. The 1,1-dimethylethyl group, $-\text{C}(\text{CH}_3)_3$, can also be called

- A. butyl.
- B. isobutyl.
- C. *sec*-butyl.
- D. *tert*-butyl.

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.16
Subtopic: Alkyl groups
Topic: Alkanes (Acyclic and Cyclic)

39. What is the relationship between the following two structures?



- A. identical structures
- B. resonance forms
- C. constitutional isomers
- D. different compounds with different compositions

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Easy

Gradable: automatic

Section: 02.11

Subtopic: Skeletal/bond-line structures

Topic: Drawing Organic Molecules

40. The sp^3 orbitals of carbon in CH_4 are formed from the

- A. three 2p orbitals.
- B. 2s and two of the 2p orbitals.
- C. 2s and one of the 2p orbitals.
- D. 2s and the three 2p orbitals.

Accessibility: Keyboard Navigation

Bloom's Level: 2. Understand

Chapter: 02

Difficulty: Medium

Gradable: automatic

Section: 02.06

Subtopic: Hybridization

Topic: Molecular Shape

41. The geometry of sp^3 hybrid orbitals can be described as pointing towards the corners of a

- A. triangle.
- B. square.
- C. tetrahedron.
- D. square pyramid.

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.06
Subtopic: Hybridization
Topic: Molecular Shape

42. What is the Cl-C-Cl bond angle in CCl_4 ?

- A. 60°
- B. 90°
- C. 109.5°
- D. 120°

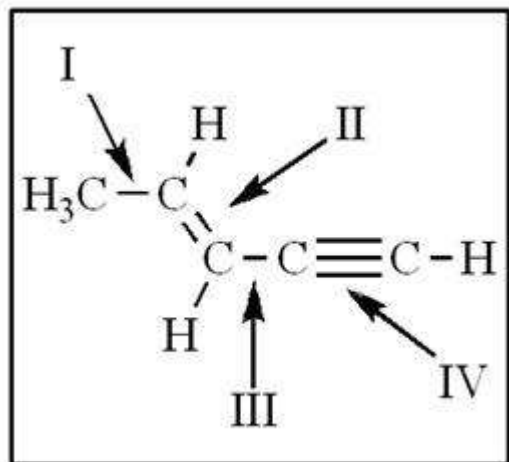
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Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.08
Subtopic: Hybridization
Topic: Molecular Shape

43. Which of the following has the lowest boiling point?

- A. pentane
- B. 2,2-dimethylpropane
- C. 2-methylbutane
- D. hexane

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.21
Subtopic: Intermolecular forces
Topic: Functional Groups

44. The shortest and longest carbon-carbon bonds, respectively, in this molecule are:



- A. II and III
- B. IV and III
- C. I and IV
- D. IV and I

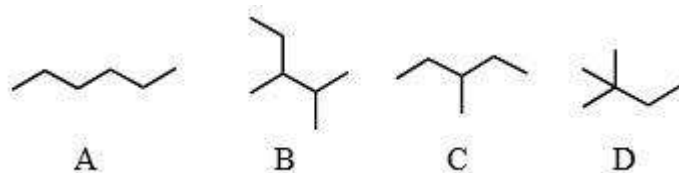
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.08
Subtopic: Bond properties
Subtopic: Types of bonds
Topic: Structure and Bonding

45. How many isomers of C_6H_{14} are possible?

- A. four
- B. five
- C. six
- D. seven

Accessibility: Keyboard Navigation
Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.15
Subtopic: Constitutional isomers
Topic: Drawing Organic Molecules

46. Which of the molecules below is NOT an isomer of formula C_6H_{14} ?



- A. A
- B. B**
- C. C
- D. D

Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Easy
Gradable: automatic
Section: 02.18
Subtopic: Constitutional isomers
Subtopic: Skeletal/bond-line structures
Topic: Drawing Organic Molecules

47. Which of the following statements is not true concerning hydrocarbons?

- A. Hydrocarbons are compounds that carbon, hydrogen, and oxygen atoms.**
- B. Alkanes, alkenes, and alkynes are examples of aliphatic hydrocarbons.
- C. Aromatic hydrocarbons are also referred to as arenes.
- D. Hydrocarbons may contain sigma bonds and/or pi bonds.

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Easy
Gradable: automatic
Section: 02.01
Subtopic: Alkanes
Subtopic: Alkenes
Subtopic: Alkynes
Subtopic: Arenes (Aromatics)
Subtopic: Hydrocarbons
Topic: Functional Groups

48. How many isomers of C_4H_9Cl are possible?

- A. two
- B. three
- C. four**
- D. five

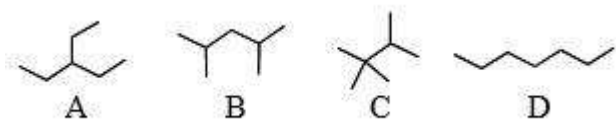
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Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.11
Subtopic: Constitutional isomers
Topic: Drawing Organic Molecules

49. The smallest straight-chain alkane that is liquid at room temperature and atmospheric pressure is

- A. propane.
- B. butane.
- C. pentane.**
- D. hexane.

Accessibility: Keyboard Navigation
Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.21
Subtopic: Intermolecular forces
Topic: Functional Groups

50. The lowest-boiling isomer of C_7H_{16} would be



- A. A.
- B. B.
- C. C.
- D. D.

Bloom's Level: 2. Understand
Chapter: 02

Difficulty: Medium

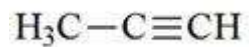
Gradable: automatic

Section: 02.21

Subtopic: Intermolecular forces

Topic: Functional Groups

51. The C-C-C bond angle in propyne, shown below, is



- A. 90° .
- B. 109.5° .
- C. 120° .
- D. 180° .

Bloom's Level: 3. Apply

Chapter: 02

Difficulty: Medium

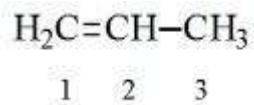
Gradable: automatic

Section: 02.09

Subtopic: Hybridization

Topic: Molecular Shape

52. The hybridization of carbon atoms 1, 2, and 3 in the following are respectively,



- A. sp , sp , and sp^2 .
- B. sp , sp , and sp^3 .
- C.** sp^2 , sp^2 , and sp^3 .
- D. sp^2 , sp^3 , and sp^3 .

Bloom's Level: 3. Apply
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.08
Subtopic: Hybridization
Topic: Molecular Shape

53. How many π bonds are present in the following structure?



- A. one
- B. two
- C.** three
- D. four

Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Easy
Gradable: automatic
Section: 02.09
Subtopic: Hybridization
Topic: Molecular Shape

54. The carbon-carbon single bond in the following is formed by the overlap of which two orbitals?



- A. sp^2-sp^2
- B. sp^2-sp^2
- C. sp^2-sp^3
- D. sp^2-sp^3

Bloom's Level: 2. Understand
Chapter: 02
Difficulty: Medium
Gradable: automatic
Section: 02.09
Subtopic: Hybridization
Topic: Molecular Shape

Chapter 2 - Alkanes and Cycloalkanes: Introduction to Hydrocarbons (Test Bank) Summary

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