Assessment

Chemistry: Lesson 20

Organic compounds MUST contain

A) N

B) O

C) C

D) F

Organic

Carbon forms a maximum of ___ covalent bonds

A. 1 bond.

B. 2 bonds.

C. 3 bonds.

D. 4 bonds.

E. 5 bonds.

Hydrocarbons are generally insoluble in water, because they are nonpolar.

A. True

B. False

Hydrocarbons are ___ and ___in water.

A. polar and soluble

B. polar and insoluble

C. nonpolar and soluble

D. nonpolar and insoluble

Which of the following is NOT a hydrocarbon?

A. CH_4

B. CH_3OH

C. CH_3CH_3

D. CCl_4

E. B&D

What is the general formula for an alkane?

a) C_nH_{2n+2}

b) C_nH_{2n+1}

c) C_nH_{2n}

d) C_nH_{2n-1}

e) C_nH_{2n-2}

Which of the following is an alkane?

A. CH_4

B. C_3H_8

C. CH_3CH_3

D. C_8H_{18}

E. All of the above

What is the class of hydrocarbon compounds that contains carbon–carbon single bonds?

A. **alkane**

B. **aldehyde**

C. **alkene**

D. **haloalkane**

Saturated hydrocarbons have ___ bonds.

A. single

B. double

C. Triple

D. quadruple

Compounds that have the same molecular formula but differ in the way the atoms are arranged are called _____.

a) isotopes

b) isomers

c) homologs

d) allotropes

The simplest alkane is methane.

A. True

B. False

The name of the hydrocarbon with three carbon atoms and having only single bonds between carbon atoms is

A) decane.

B) butane.

C) propane.

D) ethane.

E) methane.

What type of hydrocarbon is C_2H_6?

A. An alkane

B. An alkene

C. An alkyne

D. Cyclical

E. Two of the above

What is the name of this compound?

A) ethane

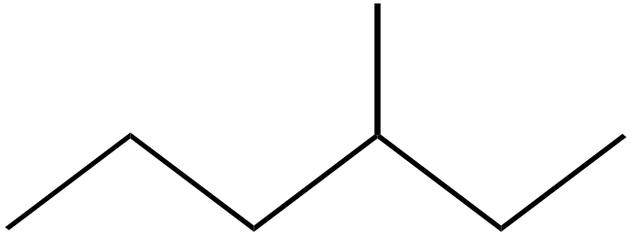
B) propane

C) butane

D) pentane

E) hexane

How many carbon atoms are in the following condensed structure?



A. 5

B. 6

C. 7

D. 8

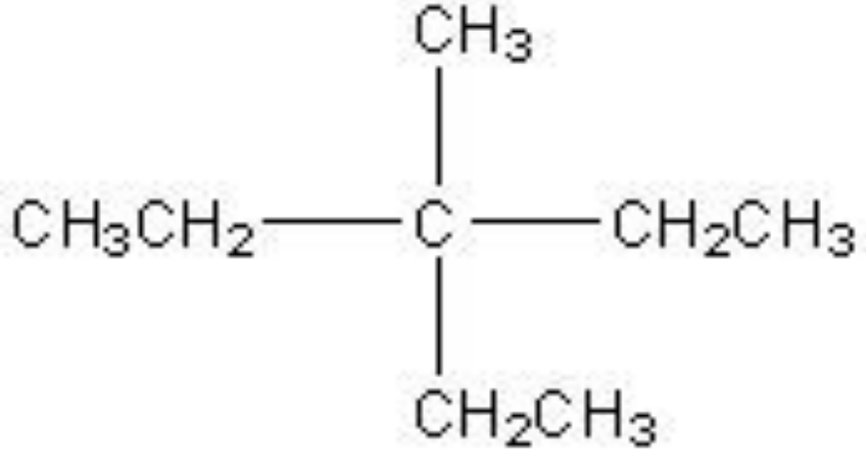
Give the IUPAC name for the branched alkane pictured below.

a) **3-methylheptane**

b) **3-methyl-3 -ethylpentane**

c) **4,4-diethylbutane**

d) **3-ethyl-3-methylpentane**



The molecule shown is named as a substituted _____ because _____.

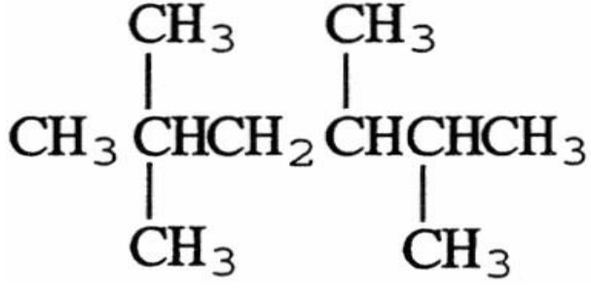
A) decane; it contains 10 atoms of carbon.

B) hexane; it contains six atoms of carbon in its longest chain.

C) tetramethane; it contains four methyl groups as branches.

D) hexamethane; it contains six methyl groups altogether.

E) butane; four carbons are substituted onto the chain.

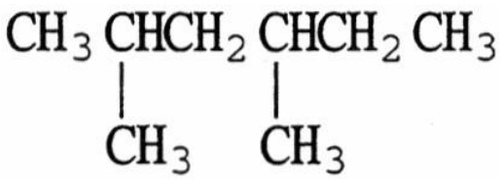


50) The condensed structure of 2,2,4,4-tetramethylheptane is _____.

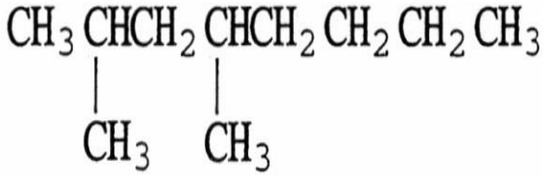
Question 9

The condensed structure of 2,2,4,4-tetramethylheptane is _____.

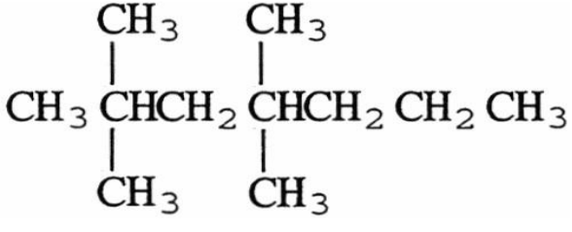
A



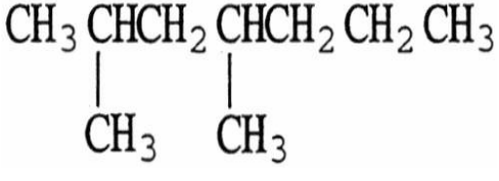
C



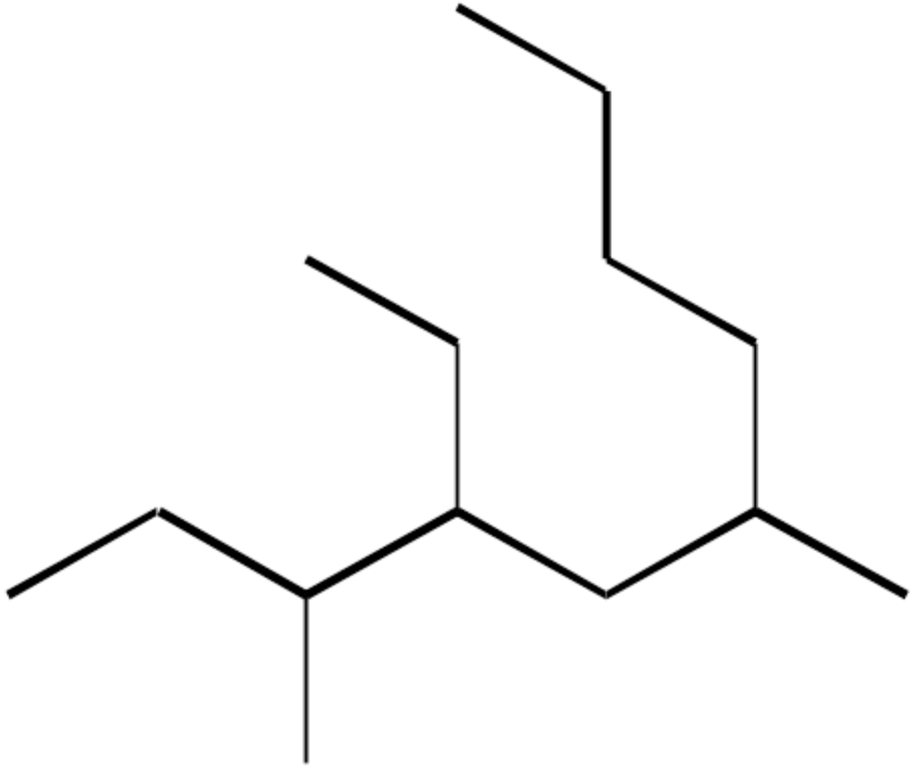
B



D



Give the IUPAC name for the branched alkane pictured below.



a) 6-butyl-4-ethyl-3-methylheptane

b) 2-butyl-4-ethyl-5-methylheptane

c) 4-ethyl-3,6-dimethyldecane

d) 7-ethyl-5,8-dimethyldecane

e) 4-ethyl-3,6-dimethyldecane

In the name cyclohexane, the prefix cyclo means that _____.

a) **the compound is explosive**

b) **the carbon atoms are joined in a ring**

c) **the compound is a derivative of benzene**

d) **the carbons have a valence of three**

What is the general formula for cycloalkane?

a) C_nH_{2n+2}

b) C_nH_{2n+1}

c) C_nH_{2n}

d) C_nH_{2n-1}

e) C_nH_{2n-2}