

D.

Question 11

130 out of 130 points

An organic molecule with a general formula of RCOOH is a (an)

Selected Answer: organic acid.

A.

Answers: organic acid.

A.

B. aldehyde.

ketone.

C.

ester.

D.

Question 12

130 out of 130 points

Which of the following compounds cannot exist?

Selected Answer:

C₂H₃

Answers:

C₂H₃

C₂H₄

C₃H₈

C₄H₁₀

An organic molecule with a general formula of ROH is a (an)

Selected Answer:

alcohol.

Answers:

C.

ether.

A.

organic acid.

B.

alcohol.

C.

D. ester.

Organic compounds called isomers have

Selected Answer:

C.

the same molecular formulas but different physical structures.

Question 5

130 out of 130 points

Which of the following is not true about benzene?

Selected Answer:

B. It is a dark brown liquid in its natural state.

Answers:

A. It has a strong odor.

A.

B. It is a dark brown liquid in its natural state.

C. It can be used as a solvent.

D. It does not mix with water.

D.

Question 6

130 out of 130 points

An alkane with 3 carbon atoms would have how many hydrogen atoms in the molecule?

Selected Answer: B. 8

Answers:

A. 10

B. 8

C. 4

D. 6

Question 7

130 out of 130 points

A hydrocarbon is an organic compound consisting of

Selected Answer:

carbon and hydrogen.

b.

Answers:

a.

any number of elements as long as they include carbon and hydrogen.

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carbon and hydrogen.

b.

water and carbon.

c.

d. carbon, hydrogen, and oxygen.

A hydrocarbon with two double covalent bonds between carbon atoms is a (an)

Selected Answer:

alkene

D.

Answers:

A. alkyne

Aromatic hydrocarbon

B.

alkane

C. –

alkene

D.

Carbon can form many different compounds because it can

Selected Answer:

a.

combine with other carbon atoms in addition to other elements.

Answers:

a.

combine with other carbon atoms in addition to other elements.

combine with more metals than other elements.

b.

c. combine with more nonmetals than other elements.

d.

make a molecule in the shape of a cube, tetrahedron, or cylinder.

Which of the following is not true about benzene?

Selected Answer:

B.

It is a dark brown liquid in its natural state.

Organic compounds called aromatic hydrocarbons are compounds that

Selected Answer:

A. are based on the benzene rings structure.

Answers:

A. are based on the benzene rings structure.

B. have a wonderful odor

C.

B.

C.

D. occur in nature with all carbon bonds unsaturated

D.

E. occur in nature with all carbon bonds saturated.

Organic chemistry is the study of

Selected Answer:

c. any compound with carbon as the principal element.

Answers:

a. any compound from any living thing.

b.

c. none of the above.

d.

e. any compound with carbon as the principal element.

f.

g. carbon-containing compounds that were formed by living things.

Question 1

130 out of 130 points

The number of carbon atoms in a molecule of octane is

Selected Answer: A. 8

Answers: A. 8

B. 4

C. 2

D. 1

Question 2

130 out of 130 points

A gasoline mixture of hydrocarbons that burns very rapidly has

Selected Answer: D. a low octane number.

Answers: A. smaller hydrocarbon molecules.

B. many branched chains.

C. a high octane number.

D. a low octane number.

Question 3

130 out of 130 points

A hydrocarbon with two double covalent bonds between carbon atoms is a (an)

Selected Answer: alkene

D.

Answers:

A. alkyne