

Carbon Chemistry ▪ Chapter 8 Pre-Assessment

Write the letter of the correct answer on the line at the left.

- _____ 1. A chemical bond is
a. a way of organizing elements in the periodic table.
b. the force that holds two atoms together.
c. an example of a physical property.
d. a result of a physical change.
- _____ 2. The ways in which an atom can bond with other atoms depends on the atom's
a. valence electrons. b. density.
c. neutrons. d. atomic mass.
- _____ 3. In a carbon dioxide molecule (CO_2), carbon forms a(n)
a. ionic compound with oxygen.
b. atomic number.
c. polyatomic ion.
d. double bond with each of two oxygen atoms.
- _____ 4. The most loosely held electrons in an atom are called
a. unstable electrons. b. covalent electrons.
c. valence electrons. d. low-energy electrons.

Carbon Chemistry ▪ Section 8.1 Quiz

If the statement is true, write true. If it is false, change the underlined word or words to make the statement true.

- _____ 1. Two forms of pure carbon are gold and graphite.
- _____ 2. Carbon is similar to other elements because it can bond to itself and to many other elements.
- _____ 3. Carbon can form four bonds because it has four valence electrons.
- _____ 4. Carbon atoms can share its valence electrons with other atoms, forming ionic bonds.
- _____ 5. In a fullerene, carbon atoms are arranged in the shape of a long, hollow cylinder.

Carbon Chemistry ▪ Section 8.2 Quiz

Fill in the blank to complete each statement.

1. _____ can be found in living things, products made from living things, and materials produced artificially in laboratories and factories.
2. Four common properties of organic compounds are _____ melting points, _____ boiling points, _____ electrical conductivity, and _____ solubility in water.
3. Hydrocarbons can be classified by the arrangements of their atoms and by the types of _____ between carbon atoms.
4. Butane and isobutane are _____ with different structural formulas, melting points, and boiling points.
5. In a substituted hydrocarbon, atoms of other elements replace one or more _____ atoms in a hydrocarbon.

Carbon Chemistry ▪ Section 8.3 Quiz

If the statement is true, write true. If it is false, change the underlined word or words to make the statement true.

- _____ 1. Food materials, living things, and plastic are all made of organic compounds.
- _____ 2. Oxygen is the most common element found in compounds with carbon.
- _____ 3. The properties of a protein depend on which esters are used to form the polymer and in what order.
- _____ 4. The starting materials for many synthetic polymers come from coal or natural gas.
- _____ 5. Fiberglass is a type of protein.

Carbon Chemistry ▪ *Section 8.4 Quiz*

Fill in the blank to complete each statement.

1. Living things require four classes of organic compounds: _____, _____, _____, and _____.
2. _____ are the simplest carbohydrates.
3. Starch and cellulose are two _____ assembled from glucose.
4. A bird's feathers, a fish's scales, and your fingernails are all made of _____.
5. To help support the function of large molecules, organisms require simpler substances such as _____, _____, _____, and _____.