

Fundamentals of Organic Chemistry

Organic Chemistry · Answer Key · 8 Questions

1. Which element is the primary building block of organic compounds?

- A) Oxygen
- B) Nitrogen
- C) Carbon**
- D) Sulfur

2. What type of bond is typically formed between carbon atoms in organic molecules?

- A) Ionic bond
- B) Hydrogen bond
- C) Metallic bond
- D) Covalent bond**

3. Which of the following is the simplest alkane?

- A) Ethane
- B) Methane**
- C) Propane
- D) Butane

4. What is the general formula for alkanes?

- A) C_nH_{2n+2}**
- B) C_nH_{2n}
- C) C_nH_{2n-2}
- D) C_nH_n

5. Which functional group contains a carbon-oxygen double bond?

- A) Alcohol
- B) Ether
- C) Ketone**
- D) Amine

6. What is the molecular formula of glucose, a common sugar?

- A) $C_5H_{10}O_5$
- B) $C_6H_{12}O_6$**
- C) C_2H_5OH
- D) CH_3COOH

7. Which of the following is an example of an alcohol functional group?

A) -COOH

B) -NH₂

C) -OH

D) -CHO

8. What is the process called when a saturated hydrocarbon reacts with oxygen, producing heat and light?

A) Reduction

B) Oxidation

C) Combustion

D) Polymerization