**Read the passage and answer the following questions:**

 Chemistry is a fundamental branch of science that focuses on the study of matter, which includes everything that has mass and occupies space. It explores the structure, composition, and properties of substances at the atomic and molecular levels. Atoms, the smallest units of matter, consist of protons, neutrons, and electrons. These atoms can bond together to form molecules through various types of chemical bonds, such as covalent bonds, where atoms share electrons, and ionic bonds, where electrons are transferred between atoms. Elements, which are pure substances made of one type of atom, are organized in the periodic table based on their atomic number, electron configuration, and chemical properties. In chemical reactions, substances known as reactants undergo transformations to form new substances called products. This process involves the breaking and forming of chemical bonds, often accompanied by the release or absorption of energy, typically in the form of heat. Endothermic reactions absorb energy, while exothermic reactions release it. The study of acids and bases is also central to chemistry, where the pH scale measures the acidity or alkalinity of a solution. Catalysts, which speed up reactions without being consumed, and equilibrium, the state where reactants and products are in balance, are key concepts in understanding how reactions occur. Additionally, chemical kinetics and thermodynamics help explain the rates of reactions and the energy changes involved. Through these principles, chemistry provides insights into a wide range of natural and synthetic processes, from biological systems to industrial applications.

1. What is the definition of chemistry according to the text?

2. What are the three main subatomic particles that make up an atom?

3. Explain the difference between covalent and ionic bonds.

4. How are elements organized in the periodic table?

 5. What are reactants and products in a chemical reaction?

6. What is the difference between endothermic and exothermic reactions?

7. How does the pH scale help in understanding acids and bases?

8. What role do catalysts play in chemical reactions?

 9. What is chemical equilibrium, and how is it achieved in a reaction?

 10. Why are chemical kinetics and thermodynamics important in the study of reactions?

11.extract from the passage 10 scientifique terminologies related to chemistry then translate them from English to Arabic