1. To break a chemical bond, energy must be
   A) absorbed          B) destroyed
   C) produced          D) released

2. What occurs in order to break the bond in a Cl₂ molecule?
   A) Energy is absorbed.
   B) Energy is released.
   C) The molecule creates energy.
   D) The molecule destroys energy.

3. Given the balanced equation representing a reaction:
   \( \text{Cl}_2 \rightarrow \text{Cl} + \text{Cl} \)
   What occurs during this reaction?
   A) A bond is broken as energy is absorbed.
   B) A bond is broken as energy is released.
   C) A bond is formed as energy is absorbed.
   D) A bond is formed as energy is released.

4. Which statement describes what occurs as two atoms of bromine combine to become a molecule of bromine?
   A) Energy is absorbed as a bond is formed.
   B) Energy is absorbed as a bond is broken.
   C) Energy is released as a bond is formed.
   D) Energy is released as a bond is broken.

5. Given the balanced equation:
   \( \text{I} + \text{I} \rightarrow \text{I}_2 \)
   Which statement describes the process represented by this equation?
   A) A bond is formed as energy is absorbed.
   B) A bond is formed and energy is released.
   C) A bond is broken as energy is absorbed.
   D) A bond is broken and energy is released.

6. The balanced equation below represents a molecule of bromine separating into two bromine atoms.
   \( \text{Br}_2 \rightarrow \text{Br} + \text{Br} \)
   What occurs during this change?
   A) Energy is absorbed and a bond is formed.
   B) Energy is absorbed and a bond is broken.
   C) Energy is released and a bond is formed.
   D) Energy is released and a bond is broken.

7. The forces between atoms that create chemical bonds are the result of interactions between
   A) nuclei
   B) electrons
   C) protons and electrons
   D) protons and nuclei

8. A chemical bond results when two nuclei have a simultaneous attraction for
   A) nucleons
   B) protons
   C) neutrons
   D) electrons

9. What happens when two oxygen atoms combine to form a molecule of oxygen?
   A) Chemical bonds are broken and energy is absorbed.
   B) Chemical bonds are broken and energy is released.
   C) Chemical bonds are formed and energy is absorbed.
   D) Chemical bonds are formed and energy is released.

10. As energy is released during the formation of a bond, the stability of the chemical system generally will
    A) decrease          B) increase
    C) remain the same

11. As a chemical bond forms between two hydrogen atoms in a system, energy is released and the stability of the system
    A) decreases          B) increases
    C) remains the same

12. As a chemical bond forms between two hydrogen atoms in a system, energy is released and the stability of the system
    A) decreases          B) increases
    C) remains the same

13. Given the equation:
    \( \text{I} + \text{I} \rightarrow \text{I}_2 \)
    As the atoms of the iodine react to form molecules of iodine, the stability of the iodine
    A) decreases          B) increases
    C) remains the same
1. A
2. A
3. A
4. C
5. B
6. B
7. C
8. D
9. D
10. B
11. A
12. B
13. B