Name _____

Molecule Marvels: The Fascinating Concept of Resonance

Multiple Choice Questions

1. What is resonance in molecules?

A. A type of vibration in atoms

B. The phenomenon where atoms shift their positions in a molecule

C. The tendency of molecules to change their shapes

D. The movement of electrons between atoms

2. Why do molecules with resonance structures tend to be more stable?

A. Because they have more electrons

B. Because they have fewer electrons

C. Because electron density is spread out, preventing the buildup of charges

D. Because they have stronger chemical bonds

3. What is benzene, and why is it an example of resonance?

A. A type of gas with a strong odor

B. A hexagonal ring composed of carbon atoms and hydrogen atoms

C. A linear molecule with no double bonds

D. A type of salt found in the ocean

4. Which of the following is NOT a key aspect of resonance?

A. Multiple structures

B. Delocalization of electrons

C. Stability of molecules

D. The presence of single bonds

5. How does resonance impact the properties and reactivity of molecules?

A. It has no effect on molecules.

B. It makes molecules less stable.

C. It helps explain why some molecules are more stable and why certain reactions occur.

D. It causes molecules to change their chemical composition.