Science Fables

The Mystery of the Invisible Building Blocks

Story Quiz

This quiz checks what you learned about atomicity and valency — counting atoms in molecules and how atoms combine.

1. What does atomicity tell us about a molecule?

A. The total number of atoms in the molecule
B. The number of bonds an atom can form
C. The charge of the molecule
D. The mass of the molecule

2. What is the atomicity of water, H_2O?

A. 1
B. 2
C. 3
D. 4

3. According to the story, what is the common valency of oxygen?

A. 1
B. 2
C. 3
D. 4

4. What is the atomicity of phosphorus, P_4?

A. 2
B. 3
C. 4
D. 8

5. Which statement correctly explains the difference between atomicity and valency?

A. Atomicity counts atoms in a molecule, while valency describes an atom's combining capacity
B. Atomicity describes combining capacity, while valency counts atoms in a molecule
C. Atomicity and valency always have the same value
D. Atomicity and valency both describe the mass of atoms

Answer Key

1. A — The total number of atoms in the molecule

Atomicity is the total number of atoms present in one molecule.

2. C — 3

Water (H_2O) has 2 hydrogen atoms and 1 oxygen atom, so its atomicity is 3.

3. B — 2

Oxygen’s common valency is 2 — its combining capacity.

4. C — 4

Phosphorus (P_4) has 4 atoms in one molecule, so its atomicity is 4.

5. A — Atomicity counts atoms in a molecule, while valency describes an atom's combining capacity

Atomicity counts the atoms in a molecule; valency describes an atom’s combining capacity.