

QUIZEN – Atoms and Molecules (9C03)

Learning Level 1	Learning Level 2	Learning Level 3
Q - Remembering (knowledge-based questions) U - Understanding (comprehension-based questions)	I - Applying (application-based questions) Z - Analyzing (analysis-based questions)	E - Evaluating (evaluation-based questions) N - Creating (creation-based questions)

Learning Level 1

1. Define the Law of Conservation of Mass.
2. What is the Law of Definite Proportions?
3. What is an atom?
4. What is the atomic number of an element?
5. What is a molecule?

Learning Level 2

6. Calculate the mass of sodium chloride produced when 5 g of sodium reacts with chlorine.
7. In a compound, the percentage by mass of carbon and oxygen are 27.3% and 72.7% respectively. If the molecular mass of the compound is 88 u, what is its empirical formula?
8. Why do elements in the same group of the periodic table have similar chemical properties?
9. Explain the difference between isotopes and isobars.
10. Identify the following as an element, a compound, or a mixture: water, helium gas, gold, air, sodium chloride.

Learning Level 3

11. Evaluate the statement: "The Law of Multiple Proportions is just a variation of the Law of Definite Proportions."
12. Compare and contrast the Bohr's model and the quantum mechanical model of the atom.
13. Evaluate the statement: "All atoms of the same element are identical."
14. Create a diagram to show the structure of an atom. Label the subatomic particles and their charges.
15. Design an experiment to verify the Law of Conservation of Mass. Provide a step-by-step procedure and explain how you would analyze the results