

QUIZEN – Structure of the Atoms (9C04)

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 valency.
2. What is the difference between isotopes and isobars?
3. Write the electronic configuration of nitrogen and calculate its valency.
4. Define atomic number and mass number of an element.
5. How does the number of valence electrons determine the valency of an element?

Learning Level 2

6. The atomic number of an element X is 20. Write its electronic configuration and determine its valency.
7. An atom of element A has 7 electrons in its outermost shell. Determine its valency and write its electronic configuration.
8. Why do isotopes of an element have the same chemical properties but different physical properties?
9. What is the valency of an element whose electronic configuration is 2, 8, 7?
10. How can the isotopes of an element be used in radiocarbon dating?

Learning Level 3

11. Compare and contrast the electronic configuration of sodium and chlorine. Explain how they achieve the octet configuration.
12. How can isotopes be used in nuclear reactors for generating electricity? Explain with an example.
13. Evaluate the statement: "Isotopes have the same chemical properties as their parent element." Provide evidence to support or refute this statement.
14. Create a diagram to show the electronic configuration of carbon and its isotopes.
15. Design an experiment to demonstrate the concept of valency using common household substances.