QUIZEN – Periodic Table (11C03)

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. State Mendeleev's periodic law.
2. What is the atomic number of an element? How does it relate to the position of an element in the periodic table?
3. Define the term "period" in the periodic table. How many periods are there in the modern periodic table?
4. Explain the concept of valence electrons. How is the number of valence electrons related to the group number of an element in the periodic table?
5. Compare and contrast the properties of metals and nonmetals.

Learning Level 2

6. The element X has an atomic number of 20. Identify its period and group in the periodic table.
7. Arrange the following elements in increasing order of their atomic radii: Li, Be, B, C, N.

8. Element A has an atomic number of 12, and Element B has an atomic number of 16. Which element has a larger atomic radius? Justify your answer.

9. Identify the group to which each of the following elements belongs: (a) Calcium (Ca), (b) Chlorine (Cl), (c) Potassium (K), (d) Neon (Ne).

10. The first ionization energy of Element X is higher than that of Element Y. Which element is more likely to be a metal and which one a nonmetal? Explain your reasoning.

Learning Level 3

11. Evaluate the periodic trend of atomic radius across a period. Explain any exceptions to the trend.

12. Compare and contrast the ionization energy and electron affinity of elements in the periodic table. How do these properties change as you move across a period and down a group?

13. Create a concept map illustrating the periodic trends of atomic radius, ionization energy, and electronegativity. Include suitable examples and explanations for each trend.

14. Analyze the importance of the periodic table in predicting the chemical properties of elements. Provide real-life examples to support your answer.

15. Design an experiment to investigate the periodic trend of reactivity among the alkali metals. Outline the materials, procedure, and expected results of the experiment.