Unit 1: History of Chemistry

14 MCQs. Correct option in bold. 1 mark each.

1. The principle of conservation of mass states that mass
A. is converted into energy in every reaction
B. remains constant during a chemical reaction
C. is destroyed during a chemical reaction
D. is created during a chemical reaction

2. The principle of conservation of mass was first shown by
A. J.J. Thomson
B. Dmitri Mendeleev
C. Antoine Lavoisier
D. Ernest Rutherford

3. Mendeleev created the periodic table by observing
A. dates of discovery
B. colours of elements
C. alphabetical order of elements
D. patterns in the properties of elements

4. Mendeleev's periodic table was powerful because it
A. predicted elements that had not been discovered yet
B. ignored atomic masses
C. arranged elements by colour
D. listed only metals

5. The process in which other scientists check a piece of scientific work before it is published is called
A. peer pressure
B. controlled experiment
C. peer review
D. reproducibility

6. The peer review process ensures
A. higher funding
B. accuracy and validity of findings
C. faster publication
D. reduced experimentation

7. A scientific paradigm is a
A. set of ideas, methods and rules that guide scientists in their research
B. type of apparatus
C. chemical reaction
D. single experiment

8. Which of the following was an 18th-century chemical paradigm?
A. Periodic table
B. Atomic theory
C. Quantum mechanics
D. Phlogiston theory

9. The phlogiston theory was replaced by the
A. oxygen theory of combustion
B. plum pudding model
C. periodic law
D. kinetic theory

10. The Plum Pudding model of the atom was suggested by
A. Mendeleev
B. J.J. Thomson
C. Bohr
D. Rutherford

11. The atomic model that includes a small, dense, positively charged nucleus was given by
A. Mendeleev
B. Thomson
C. Dalton
D. Rutherford

12. A 95 % confidence level in scientific reporting means that scientists are
A. results are 100 % accurate
B. 95 % of scientists agree
C. 95 % sure the true value lies within the stated range
D. the experiment was repeated 95 times

13. Repeatability refers to getting
A. the same results in different labs
B. results by different methods only
C. different results under the same conditions
D. the same results under the same conditions

14. Reproducibility refers to getting the same or similar results
A. under different conditions, by different methods or in different labs
B. by the same scientist only
C. under exactly the same conditions
D. in the same lab with the same tools