



EKALAVYA BATCH 1

1. Who discovered the electron?

- (a) Ernest Rutherford (b) J.J. Thomson (c) James Chadwick (d) E. Goldstein

2. Which subatomic particle has no charge and is found in the nucleus?

- (a) Electron (b) Proton (c) Neutron (d) Positron

3. The nucleus of an atom was discovered by:

- (a) Rutherford's α -particle scattering experiment (b) Thomson's plum pudding model
(c) Bohr's atomic model (d) Dalton's atomic theory.

4. The mass number of an atom is defined as the sum of:

- (a) Protons and electrons (b) Neutrons and electrons (c) Protons and neutrons (d) Electrons, protons, and neutrons

5. What is the maximum number of electrons that can be accommodated in the M-shell?

- (a) 2 (b) 8 (c) 18 (d) 32

6. The atomic number of an element is equal to the number of:

- (a) Protons only (b) Neutrons only (c) Protons and neutrons (d) Electrons and neutrons

7. Isotopes are atoms of the same element that have:

- (a) Same mass number but different atomic numbers (b) Same atomic number but different number of neutrons
(c) Same number of neutrons but different atomic numbers (d) Different atomic numbers and different mass numbers

8. The electronic configuration of a Sodium atom (Atomic Number = 11) is:

- (a) 2, 8 (b) 8, 2, 1 (c) 2, 8, 1 (d) 2, 1, 8

9. What is the valency of Chlorine (Atomic Number = 17)?

- (a) 7 (b) 1 (c) 5 (d) 0

10. Which pair represents isobars?

- (a) ${}_1\text{H}^1, {}_1\text{H}^2$ (b) ${}_6\text{C}^{12}, {}_6\text{C}^{14}$ (c) ${}_{18}\text{Ar}^{40}, {}_{20}\text{Ca}^{40}$ (d) ${}_8\text{O}^{16}, {}_8\text{O}^{18}$.

11. An alpha particle is considered to be:

- (a) A helium atom (b) A Hydrogen nucleus (c) A doubly charged Helium ion He^{2+} (d) A high-speed electron

12. The first shell (K-shell) can hold a maximum of:

- (a) 2 electrons (b) 8 electrons (c) 18 electrons (d) 32 electrons

13. What is the valency of a noble gas like Neon (Ne)?

- (a) 1 (b) 2 (c) 8 (d) 0

14. If an element X has 12 protons, 12 electrons, and 12 neutrons, what is its mass number?

- (a) 12 (b) 24 (c) 36 (d) 11

15. Which of the following is NOT a fundamental particle of an atom?

- (a) Proton (b) Neutron (c) Electron (d) Photon

16. An alpha particle contains:

- a) 4 (+) charge & 2 mass unit b) 2(+)charge & 4 mass unit c) 2(+) charge & 2 mass unit d) 4(+)charge & 4 mass unit

17. The atomic number of sodium is 11 and its mass number is 23. It has

- a) 11 neutrons, 12 protons b) 12 protons, 11 electrons c) 11 electrons, 12 neutrons d) 12 electrons, 11 neutrons

18. The electronic configuration of chlorine is

- a) 2,7 b) 2,8,8,7 c) 2,8,7 d) 2,7,8

19. The isotope used to remove the brain tumours and treatment of cancer is

- a) U-235 b) Na-24 c) Iodine d) C_0 -60

20. In an alpha scattering experiment, few alpha particles rebounded because

- a) Most of the space in the atom is occupied b) Positive charge of the atoms very little space
c) The mass of the atom is concentrated in the centre. d) All the positive charge and mass of the atom is concentrated in small volume.

1 b	2 c	3 a	4 c	5 c	6 a	7 b	8 c	9 b	10 c
11 c	12 a	13 d	14 b	15 d	16 c	17 c	18 c	19 d	20 d