

CHAPTER-4 | Structure of the Atom

QUIZ
PART-02

1. Bohr's model was proposed in:

- A. 1905
- B. 1911
- C. 1913
- D. 1919 (C)

Explanation: Bohr proposed his atomic model in 1913.

2. In Bohr's model, electrons revolve in:

- A. Random paths
- B. Fixed orbits
- C. Nucleus
- D. Straight lines (B)

Explanation: Electrons move in certain fixed orbits around the nucleus.

3. The first shell is called:

- A. L
- B. M
- C. N
- D. K (D)

Explanation: The first energy level is the K shell.

4. Maximum electrons in K shell are:

- A. 2
- B. 8
- C. 18
- D. 32 (A)

Explanation: Using $2n^2$, for $n = 1$, maximum electrons = 2.

5. Maximum electrons in third shell are:

- A. 2
- B. 8
- C. 18
- D. 32 (C)

Explanation: For third shell, $n = 3$, so $2n^2 = 18$.

6. Maximum electrons in outermost shell are:

- A. 2
- B. 8
- C. 18
- D. 32 (B)

Explanation: The outermost shell can have at most 8 electrons.

7. Electrons in outermost shell are called:

- A. Free electrons
- B. Core electrons
- C. Valence electrons (C)
- D. Proton electrons

Explanation: Electrons present in the outermost shell are valence electrons.

8. Valency means:

- A. Atomic mass
- B. Combining capacity (B)
- C. Number of neutrons
- D. Number of shells

Explanation: Valency is the combining capacity of an atom.

9. Atomic number 15 has configuration:

- A. 2, 8, 4, 1
- B. 2, 5, 8
- C. 2, 8, 5 (C)
- D. 2, 8, 1, 4

Explanation: The 15 electrons are filled as 2, 8, 5.

10. Valence electrons in Cl^- are:

- A. 16
- B. 8
- C. 17 (B)
- D. 18

Explanation: Chloride ion gains one electron and completes its outermost shell with 8 electrons.