

Science

(www.tiwariacademy.com)

(Chapter – 4) (Structure Of The Atom)

(Class – IX)

Page 50

Question 1:

Write the distribution of electrons in carbon and sodium atoms?

Answer 1:

The total number of electrons in a carbon atom is 6. The distribution of electrons in carbon atom is given by:

First orbit	or	K-shell	= 2 electrons
Second orbit	or	L-shell	= 4 electrons

Or,

we can write the distribution of electrons in a carbon atom as 2, 4.

The total number of electrons in a sodium atom is 11. The distribution of electrons in sodium atom is given by:

First orbit	or	K-shell	= 2 electrons
Second orbit	or	L-shell	= 8 electrons
Third orbit	or	M-shell	= 1 electron

Or,

we can write distribution of electrons in a sodium atom as 2, 8, 1.

Question 2:

If K and L shells of an atom are full, then what would be the total number of electrons in the atom?

Answer 2:

The maximum number of electrons that can occupy K and L-shells of an atom are 2 and 8 respectively. Therefore, if K and L-shells of an atom are full, then the total number of electrons in the atom would be $(2 + 8) = 10$ electrons.