

Name:		Roll No.		Subject	Chemistry
Test Type	Only Exercise MCQs	Class	11 th	Date	
Chapter	02	Unit	02	Time	

Q. No. 1: Multiple Choice Questions (MCQs)

I. The quantum number 'm' of a free gaseous atom is associated with:

- a) The effective volume of the orbital
- b) The shape of the orbital
- c) The spatial orientation of the orbital
- d) The energy of the orbital in the absence of a magnetic field

II. When 3d subshell is completely filled, the next entering electron goes into:

- a) 4f
- b) 4s
- c) 4p
- d) 4d

III. Quantum number values for 2p orbitals are:

- a) $n = 2, l = 1$
- b) $n = 1, l = 2$
- c) $n = 1, l = 0$
- d) $n = 2, l = 0$

IV. An electron having the set of values: $n = 4, l = 0, m = 0$ and $s = +1/2$ lies in:

- a) 2s
- b) 3s
- c) 4s
- d) 4p

V. The quantum number values (n, l, m) for the fourth electron of ${}^4\text{Be}$ atom are:

- a) 1, 0, 0
- b) 2, 0, 0
- c) 2, 1, 0
- d) 1, 1, 1

VI. The correct order of first ionization energies is:

- a) $F > He > Mg > N > O$
- b) $He > F > N > O > Mg$
- c) $He > O > F > N > Mg$
- d) $N > F > He > O > Mg$

VII. A p orbital has a characteristic of how many lobes?

- a) 1
- b) 2
- c) 3
- d) 4

VIII. The three p orbitals in a given energy level are oriented:

- a) Along the same axis
- b) At 45° to each other
- c) Mutually perpendicular to each other along the x, y, and z axes
- d) In a complex tetrahedral arrangement

IX. How many d orbitals are there in a given energy level?

- a) 1
- b) 3
- c) 5
- d) 7

X. What information does the principal quantum number (n) give us about orbitals?

- a) Size
- b) Shape
- c) Size and shape
- d) Spin

XI. How many unpaired electrons are present in an atom of cobalt?

- a) Two
- b) Three
- c) Four
- d) Five