CHEMISTRY-11

Chapter#05 (Complete) Test-3

Name: | Class: | ID:

Date: / / | **Marks Total:** **30** | **Marks Obtained:**
Time Allowed: 60 Min.

Maximum Marks: 06   **(OBJECTIVE TYPE)**   Time Allowed: 10 Min.

NOTE: **Tick The Correct Option:**

1) **Rutherford's model of the atom failed because:**
   (a) The atom did not have a nucleus and electrons.
   (b) It did not account for the attraction between protons and neutrons.
   (c) It did not account for the stability of the atom.
   (d) There is usually no space between the nucleus and the electrons.

2) **Neutron was discovered by:**
   (a) Rutherford   (b) Chadwick   (c) Goldstein   (d) Thomson

3) **$n+\ell$ value of 6d orbital is:**
   (a) 8   (b) 9   (c) 10   (d) 11

4) **e/m value of cathode rays is about 1836 times greater than that of the positive rays of:**
   (a) Hydrogen   (b) Oxygen   (c) Helium   (d) Neon

5) **The value of Plank's constant is:**
   (a) 6.62×10^{-34} Js   (b) 6.62×10^{-32} Js   (c) 6.62×10^{-27} Js   (d) 6.62×10^{-21} Js

6) **The letter 'f' in azimuthal quantum number stands for:**
   (a) First   (b) Fast   (c) Fundamental   (d) Front

Maximum Marks: 24   **(SUBJECTIVE TYPE)**   Time Allowed: 50 Min.

SECTION-I

Q.2: Give brief answers to the following questions: **(16)**

   i. How can it be proved that cathode rays travel in straight line?

   ii. How does a free neutron decay?

   iii. How can Bohr's model help us to justify the ionization potential of H-atom?

   iv. Define spectrum. Give its two types.

   v. How are X-rays produced?

   vi. What is meant by self-rotation of electrons?

   vii. What is Auf-bau principle?

   viii. Distribute electrons in orbitals of $_{35}$Br and $_{21}$Sc.

SECTION-II

NOTE: **Attempt All Questions:**   **(08)**

Q.3: How are positive rays produced in discharge tube? Give properties of these rays.

Q.4: Derive an expression for calculating the energy of an electron revolving in first orbit of hydrogen atom using Bohr's atomic model.