

ST. ANDREWS SCOTS SR. SEC. SCHOOL
9th Avenue I.P. Extension, Patparganj,
Delhi-110092
(Session - 2026-2027)

Class XI – Chemistry
Chapter: Structure of Atom – Assignment (25
Questions)

1. Describe Thomson's model of atom and its limitations.
2. Explain Rutherford's gold foil experiment and its observations.
3. Write the postulates of Bohr's atomic model.
4. Define atomic number and mass number.
5. Explain electromagnetic radiation and its characteristics.
6. Define wavelength, frequency and wave number.
7. State Planck's quantum theory.
8. Explain photoelectric effect and its observations.
9. Write the de Broglie equation and its significance.
10. State Heisenberg's uncertainty principle.
11. Define orbit and orbital.
12. Explain quantum numbers and their significance.
13. Define principal quantum number and its importance.
14. Define azimuthal quantum number and its values.
15. Define magnetic quantum number and spin quantum number.
16. State Pauli's exclusion principle.
17. Explain Hund's rule of maximum multiplicity.
18. State Aufbau principle and write its exceptions.
19. Write electronic configuration of Na, Mg, Al, Si.
20. Calculate wavelength of radiation with frequency 5×10^{14} Hz.
21. Calculate energy of photon with wavelength 500 nm.
22. Calculate frequency of radiation having wavelength 400 nm.
23. Calculate de Broglie wavelength of electron moving with velocity 2×10^6 m/s.
24. Find maximum number of electrons in $n = 3$ shell.

25. Write electronic configuration of Fe^{3+} ion.