1. What are canal rays?
2. If an atom contains one electron and one proton, will it carry any charge or not?
3. On the basis of Rutherford's model of an atom, which sub-atomic particle is present in the nucleus of an atom?
4. Name the sub-atomic particles of an atom.
5. What do you think would be the observation, if the α-particle scattering experiment is carried out using a foil of a metal other than gold?
6. On the basis of Thomson's model of an atom, explain how the atom is neutral as a whole.
7. Draw a sketch of Bohr's model of an atom with three shells.
8. Compare the properties of electrons, protons and neutrons.
9. What is the limitation of Rutherford's model of an atom?
10. Compare all the proposed models of an atom which you have read in your class.
11. Calculate the valency of fluorine and chlorine elements.
12. Calculate the valency of an element having 5 electrons in their outermost shell.
13. If number of electrons in an atom is 8 and number of protons is also 8, then
    (i) What is the atomic number of the atom?
    (ii) What is the charge on the atom?
14. Find out the mass number (A) of oxygen and sulphur.
    [Given: Number of protons = electrons = neutrons = 8 for oxygen atom and number of protons = neutrons = 16 for sulphur.]
15. What do you mean by 'atomic number'?
16. What is the maximum number of electrons that can be present in M-shell?
17. What do you mean by valence electrons?
18. Represent the three isotopes of hydrogen and give their names.
19. Write the electronic configuration of any one pair of isotopes and isobars.
20. If K and L-shells of an atom are full, then what would be the total number of electrons in the atom?
21. If number of electrons in an atom is 8 and number of protons is also 8, then
    (i) What is the atomic number of the atom?
    (ii) What is the charge on the atom?
22. Define valency by taking examples of silicon and oxygen.
23. For the symbol H, D and T, tabulate their subatomic particles found in each of them.
24. The average atomic mass of a sample of an element X is 16.2 u. What are the percentage of isotopes ${}^{16}_{8}X$ and ${}^{18}_{8}X$ present in the sample?
25. How will you find the valency of chlorine, sulphur and magnesium?

26. Complete the following:

Atomic number	Mass number	Number of neutrons	Number of protons	Number of electrons	Name of the atomic species
9	—	10	—	—	—
16	32	—	—	—	Sulphur
—	24	—	12	—	—
—	2	—	1	—	—
—	1	0	1	0	—