THE VILLAGE
INTERNATIONAL SCHOOL
"We Nurture Dreams"

Structure of Atom

Grade IX

Question Bank

Answer the following questions

1. List down the sub-atomic particles of an atom.
2. What are canal rays?
3. If an atom contains one electron and one proton, will it carry any charge or not?
4. What is Thompson's model of the atom?
5. On the basis of Thomson's model of an atom, explain how the atom is neutral as a whole.
6. Elaborate Rutherford's atom model.
7. Based on Rutherford's model of an atom, which sub-atomic particle is present in the nucleus of an atom?
8. Draw a sketch of Bohr's model of an atom with three shells.
9. 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?
10. Helium atom has an atomic mass of 4 u and two protons in its nucleus. How many neutrons does it have?
11. Write the distribution of electrons in carbon and sodium atoms.
12. If the K and L shells of an atom are full, then what would be the total number of electrons in the atom?
13. How will you find the valency of chlorine, sulphur and magnesium?
14. 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? and (ii) what is the charge on the atom?
15. Find out the mass number of oxygen and sulfur atoms. (No. of neutrons on O = 8, S = 16)
16. For the symbols H, D, and T tabulate three sub-atomic particles found in each of them.
17. Write the electronic configuration of any one pair of isotopes and isobars.
18. Compare the properties of electrons, protons and neutrons.
19. What are the limitations of J.J. Thomson's model of the atom?
20. What are the limitations of Rutherford's model of the atom?
21. Describe Bohr's model of the atom.
22. Compare all the proposed models of an atom given in this chapter.
23. Summarise the rules for writing of distribution of electrons in various shells for the first eighteen elements.
24. Define valency by taking examples of silicon and oxygen.
25. Explain with examples (i) Atomic number, (ii) Mass number, (iii) Isotopes and iv) Isobars. Give any two uses of isotopes.
26. Na+ has completely filled K and L shells. Explain.
27. If Z = 3, what would be the valency of the element? Also, name the element