

Ch-4 Structure of an Atom

1. An atom has atomic number 12, what is its valency and name the element?
2. Name two elements with same number of protons and neutrons?
3. Name the isotope used for treatment of cancer.
4. What does this symbol represent – A_ZX ?
5. Draw the atomic structure of –
 - a. an atom with same number of sub-atomic particles, and
 - b. an atom with same number of electrons in L and M shell.
6. What is an octate? Why would atoms want to complete their octate?
7. Find the valency of ${}^{17}_7N$ and ${}^{35}_{17}Cl$.
8. What are nucleons? What is the name given to those atoms which have same number of nucleons in it?
9. Give the difference between three sub-atomic particles.
10. Give the names of three atomic species of hydrogen.
11. Give difference between isotopes and isobars.
12. Number of protons and electrons are same in an atom. Then, why is it wrong to say that atomic number of an atom is equal to its number of electrons.
13. An atom is electrically neutral, on loss or gain of electrons why does it become charged?
14. What is valency? Explain different types of valences.
15. According to you, among the structure of atom studies which model is correct and why?
16. Give an activity to understand the implications of Rutherford's α scattering experiment by a gold foil.
17. Explain Rutherford's α -particle scattering experiment and give its observation and conclusion drawn.
18. Establish the relationship between atomic number, mass number, isotopes, isobars and valency of an atoms.
19. What are nucleons?
20. Give the electronic configuration of Cl^- ion.
21. Draw the atomic structure of helium atom.
22. What is mass number of an atom?
23. Find the valency of 4_2He and ${}^{14}_7N$.
24. An atom is electrically neutral. How can it become charged?