

## Ch.4- STRUCTURE OF ATOM

1. An element X is available in the form of two isotopes  $^{18}_8\text{X}$  and  $^{16}_8\text{X}$ . Calculate the average atomic mass of element X, if they are available as 76% and 24% respectively.
2. Calculate the no. of protons, electrons and neutrons in  $^{40}_{20}\text{Ar}$ ,  $^{35}_{17}\text{Cl}$ ,  $^{12}_6\text{C}$ ,  $^{27}_{13}\text{Al}$
3. Write the electronic configuration, valency and valence electrons in K(19) P(15) Ne(10) Si(14)
4. Write the electronic configuration and valence electrons of  $^{16}_8\text{O}$ ,  $^{24}_{12}\text{Mg}$ ,  $^{14}_7\text{N}$ ,  $^{40}_{20}\text{Ca}$
5. A) Write differences between isotopes and isobars giving an example of each.  
B) Name the three isotopes of hydrogen.
6. Isotopes of an element have the same chemical properties. Explain. Mention the applications of isotopes.
7. Mention the observation and conclusion of Rutherford's model of an atom. Write any one drawback.
8. Define mass number of an element.