CHAPTER 2

Structure of Atom

Practice Assignment 2.2

Subjective Questions

Q1. Define

(i) atomic number

(ii) mass number.

Q2. Which atomic nucleus does not have neutrons? **[Protium, $_1^1H$]**

Q3. Write the representation of an ion containing 14 proton, 15 neutron and 12 electron. **[$_{14}^{29}X^{2+}$]**

Q4. An atom having atomic mass number 13 has 7 neutrons. What is the atomic number of the atom? **[Z = 6]**

Q5. A dipositive ion has 16 protons. What should be the number of electrons in its tetra positive ion? **[12 electrons]**

Q6. Write the representation of the element, which has mass number 14 and contains 8 neutrons. **[$_6^{14}C$]**

Q7. Write the complete symbol for the atom with atomic number, Z = 17 and atomic mass, A = 35. **[$_{17}^{35}Cl$]**

Q8. Write the representation of an isotope of $_{92}^{235}U$ that has 146 neutrons. **[$_{92}^{238}U$]**

Q9. Which of the following are isoelectronic species?

Na^+, K^+, Mg^{2+}, Ca^{2+}, S^{2-}, Ar

Q10. Two nuclides A and B are isoneutronic. Their mass numbers are 76 and 77 respectively. If atomic number of A is 32, then what will be the atomic number of B? **[Z = 33]**

Q11. An ion with mass number 56 contains 3 units of positive charge and 30.4% more neutrons than electrons. Assign the symbol to this ion. $[^{56}_{26}Fe^{3+}]$

Q12. An ion with mass number 37 possesses one unit of negative charge. If the ion conatins 11.1% more neutrons than the electrons, find the symbol of the ion. $[^{35}_{17}Cl^{-}]$