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, $\frac{1}{1}H$]
- **Q3.** Write the representation of an ion containing 14 proton, 15 neutron and 12 electron. $\begin{bmatrix} 29\\14 \\ X^{2+} \end{bmatrix}$
- 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. $\begin{bmatrix} 1_4^4 C \end{bmatrix}$
- **Q7.** Write the complete symbol for the atom with atomic number, Z = 17 and atomic mass, A = 35.
- **Q8.** Write the representation of an isotope of $^{235}_{92}U$ that has 146 neutrons.

 $\begin{bmatrix} 238\\ 92 \end{bmatrix}$

Q9. Which of the following are isoelectronic species?

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

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- 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. $\begin{bmatrix} 56\\26 Fe^{3+} \end{bmatrix}$
- 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. $[^{35}_{17}Cl^-]$



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