

## Introduction, Fundamental Particles

1. The hydride ion is isoelectronic with (AFMC- 95)  
1) H<sup>+</sup>                                      2) He<sup>+</sup>                                      3) He                                      4) Be
2. Charge of the species with 17 protons, 18 neutrons and 18 electrons is (AIIMS 96)  
1) + 1                                      2) - 1                                      3) - 2                                      4) None
3. The number of electrons in is (AFMC 99)  
1) 18                                      2) 19                                      3) 17                                      4) 20
4. Many elements have non-integral masses. This is because (IIT 93)  
1) Their isotopes have different atomic number.  
2) Their isotopes have different masses.  
3) Their isotopes have non-integral masses.  
4) Their constituents, protons, electrons and neutrons combine to give fractional masses.
5. A neutral atom, with atomic number greater than one consists of (AFMC 96)  
1) Protons only                                      2) Protons and neutrons  
3) Neutrons and electrons                                      4) Neutrons, electrons and protons
6. The atomic weight of an element is 23 and its atomic number is 11. The number of protons, electrons and neutrons respectively present in the atom of the element are (E-86)  
1) 11, 11, 12                                      2) 12, 12, 11                                      3) 11, 12, 11                                      4) 12, 11, 12
7. Difference in  ${}_{17}\text{Cl}^{35}$  and  ${}_{17}\text{Cl}^{37}$  is of (AFMC 2000)  
1) No. of protons    2) No. of neutrons    3) No. of electrons    4) Atomic number

8. Substances having same number of electrons but different mass are (AFMC92)

- 1) Isotopes                      2) Isobars                      3) Isotones                      4) Allotropes

9. Rutherford scattering experiment is related to the size of (IIT 83)

- 1) Atom                      2) Electron                      3) Neutron                      4) Nucleus

10. Rutherford's experiment, which established the nuclear model of the atom, used a beam of (2002)

- 1)  $\beta$  - particles, which impinged on a metal foil and got absorbed  
2)  $\gamma$  -rays, which impinged on a metal foil and ejected electrons  
3) Helium atoms, which impinged on a metal foil and got scattered  
4) Helium nuclei, which impinged on a metal foil and got scattered

**KEY**

- 1)3    2)3    3)4    4)2    5)4    6)1    7)2    8)1    9)1    10)4