

Date Planned : __ / __ / __	Daily Tutorial Sheet - 1	Expected Duration : 90 Min
Actual Date of Attempt : __ / __ / __	JEE Advanced (Archive)	Exact Duration : _____

- Rutherford's experiment on scattering of α -particles showed for the first time that the atom has :
(A) electrons (B) protons (C) nucleus (D) neutrons (1981)
- The mass of a hydrogen is _____ kg. (1982)
- Isotopes of an elements differ in the number of _____ in their nuclei. (1982)
- The outer electronic configuration of the ground state chromium atom is $3d^4 4s^2$. (1982)
- Rutherford's scattering experiment is related to the size of the : (1983)
(A) nucleus (B) atom (C) electron (D) neutron
- The light radiations with discrete quantities of energy are called _____. (1983)
- Elements of the same mass number but of different atomic numbers are known as _____. (1983)
- When there are two electrons in the same orbital, they have _____ spins. (1983)
- The energy of the electron in the 3d-orbital is less than that in the 4s-orbital in the hydrogen atom. (1983)
- Gamma rays are electromagnetic radiations of wavelengths of 10^{-6} to 10^{-5} cm. (1983)
- The principal quantum number of an atom is related to the : (1983)
(A) size of the orbital (B) spin angular momentum
(C) orientation of the orbital in space (D) orbital angular momentum
- Any p-orbital can accommodate upto : (1983)
(A) four electrons (B) six electrons
(C) two electrons with parallel spins (D) two electrons with opposite spins
- The principal quantum number of an atom is related to the (1983)
(A) size of the orbital (B) spin angular momentum
(C) orbital angular momentum (D) orientation of the orbital in space
- Which electronic level would allow the hydrogen atom to absorb a photon but not to emit a photon?
(A) 3s (B) 2p (C) 2s (D) 1s (1984)
- *15. When alpha-particles are sent through a thin metal foil, most of them go straight through the foil, because: (1984)
(A) alpha particles are much heavier than electrons
(B) alpha particles are positively charged
(C) most part of the atom is empty space
(D) alpha particles move with high velocity