Brainbox learn easy

Chapter 4

STRUCTURE OF ATOM

Discovery of Neutrons:

Neutron is discovered by James Chadwick.

- When he bombarded fast moving α - particles with Berylium nucleus, a small particle with no charge and mass nearly equal to proton is emerged.
- This particle is named at neutron as its mass is nearly equal to proton and neutral in charge.
- Neutron is present in all elements except hydrogen.

Distribution of electrons:

Distribution of electrons in atom around nucleus is explained by Bohr's Bury rules.

Bohr's Bury rules:

1) The maximum no of electrons that can be present in any shell is given by $2n^2$. 'n' is no of shell (or) energy level.

n = 1, 2, 3 ……

Ex: In 3rd shell, n = 3 => $2n^2 = 2 (3^2) = 18$

=> Max. no of electrons present in 3rd shell is 18.

2) The maximum no of electrons that can be present in outermost shell is only 8. This can also be called at octet rule.

3) Successive shells are always filled up in stepwise manner. Second shell starts filling up only after completely filling of first shell.