Structure of Atom - I.

Isotopes : Same Atomic number, But diffent mass.

Isobars : Same mass. number, But different Z.

Isotones : Same no. of neutrons, But diffent p/Z.

Isoelectronic . Same no. of electrons.

Eg: N_2, CO, CN^-

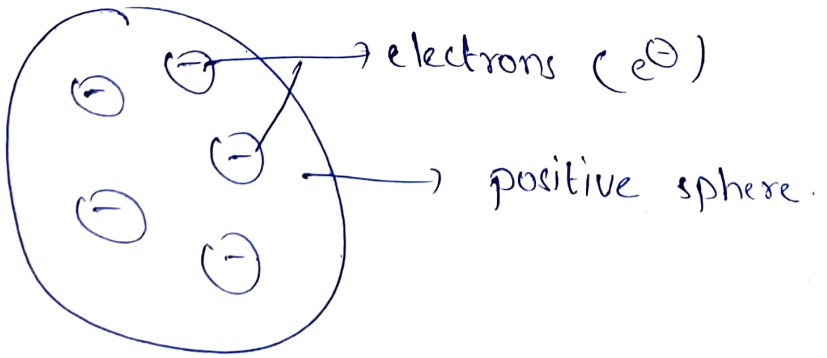
14, 14, 14

Isomers : Same mass number, but different radioactive properties.

Eg: Uranium X (half life $t_{\frac{1}{2}}$ = 1.4 min)

Uranium Z ($t_{\frac{1}{2}}$ = 6.7 hrs)

Thomson's Pudding model :



→ Similar to Watermelon.

Rutherford's model:

Highlights

→ α particles (He^{+2}) were shown having mass 4 and 2 units of positive charge

→ Narrow beam of α particles
- On gold foil of thickness 0.04×10^{-2} cm.
- Using ZnS fluorescent screen.

— Majority is hollow sphere.

Bohr's Model.

→ Mainly about H-atom.

- Applied Quantum Theory for consideration of Energy.

$$mvr = \frac{nh}{2\pi}$$

$m \rightarrow$ mass of $e^{\ominus}$

$v \rightarrow$ vel. of $e^{\ominus}$

$r \rightarrow$ radius of $e^{\ominus}$.

$n \rightarrow$ principal quantum number

$h \rightarrow$ constant. (Plank's).