

TENDER HEART HIGH SCHOOL, SEC-33B, CHD.

CLASS - VIII

CHAPTER - 4

SUBJECT - CHEMISTRY TEACHER - ANAMIKA

11.11.24

The idea of the smallest unit of matter was given by Maharshi Kanada. Acc to him matter is indestructible minute particle called Paramanu.

First scientific theory about structure of matter was given by "John Dalton"

The main postulates of Dalton's atomic theory:-

1. Matter consist of very small and indivisible particle called atom.
2. Atom can neither be created nor be destroyed.

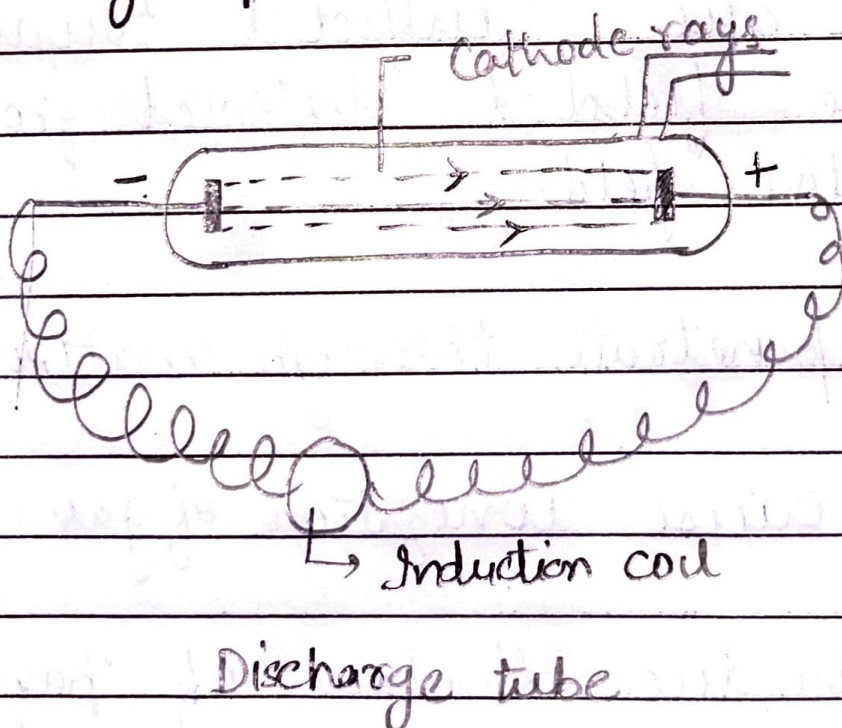
3. The atoms of an element are alike in all respect but they differ from the atoms of other element.
4. Atoms of an element combine in small number to form molecules.
5. Atoms of one element combine with atom of another element in simple ratio to form molecule.
6. Atoms are smallest unit of matter that can take part in chemical reaction.

G.J. Stoney first suggested the name of electron. However J.J. Thomson showed the existence of these charged particles and thus discovered electrons, negatively charged particle.

Element:- It is a pure substance that can neither be formed from, nor decomposed into simpler substances by ordinary physical or chemical method.

Atom:- It is smallest particle of an element that exhibit all the properties of that element.

Discovery of Electron:-



A discharge tube is a hard glass tube fitted with two metal plates known as electrodes. One of which

connected to anode and other is connected to cathode.

Properties of Cathode rays:-

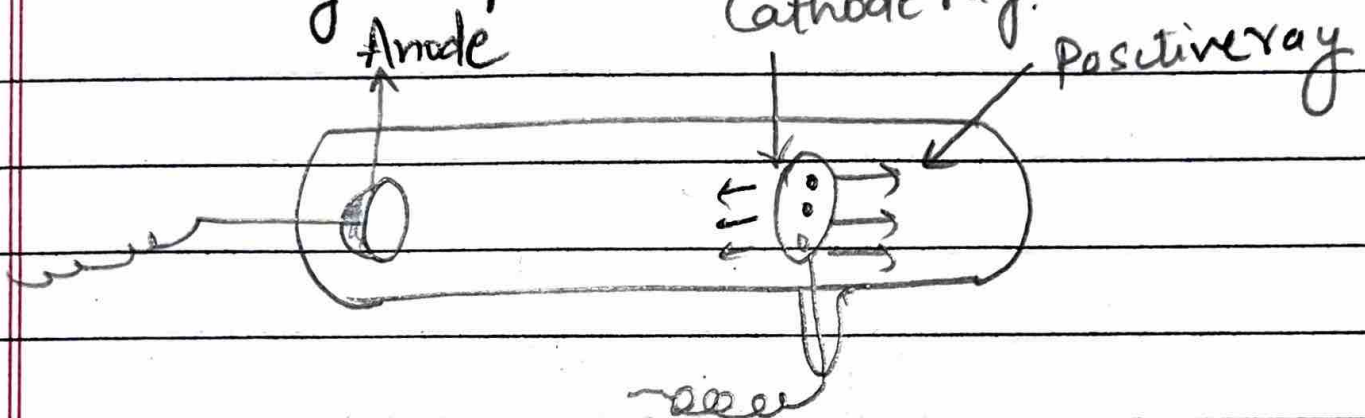
1. They travel from cathode to anode.
2. They cause greenish yellow fluorescence on a soda glass screen placed in the tube.
3. They are affected by electric field they are deflected towards positive field & deflected from negative field.
4. They penetrate through matter.
5. They cause ionization of gas.
6. They produce shadow of opaque object.

Properties of Electrons:-

1. They are constituent of all atoms.

2. The mass of e^- is $1/1837$ the mass of hydrogen.
3. They are extremely small.

Discovery of Proton



Properties of Anode Rays:-

1. They travel in straight line.
2. They are made up of positively charged particle.
3. Their e/m ratio differs from gas to gas.