9/8/20

Atomic Structure

Q1) Define an atom

Q2) State the postulates of Dalton's Atomic Theory

Q3) What are the sub-atomic particles of an atom. Mention its charge also.

Answers

ns 1. An atom is the smallest particle of matter that exhibits all the properties of that matter. They do not have independent existence. The ~~combine~~ combine with each other to form small particles called ~~mol~~ molecules

ns 2. Postulates of Dalton's Atomic Theory are :-

1. Matter consists of very small and indivisible particles called ~~any~~ atoms.

2. Atoms can neither be created nor be ~~lost~~ destroyed.

3. The atoms of an element are identical in all respects i.e size, mass, density, chemical

properties, but they differ from the atoms of other elements.

4. Atoms of an element combine in small numbers to form molecules of that element.

5. Atoms of an element combine with the atoms of another elements in a simple whole number ratio to form molecules of a compound.

6. Atoms are the smallest unit of matter that take part in chemical reactions during which only rearrangement of atoms takes place.

ans 3. The sub atomic particles of an atom are
Electron - (-ve charge)
Proton - (+ve charge)
Neutron - (neutral charge)

28/8/23

Q1 What is a discharge tube

Q2. What are the properties of cathode rays.

ans 2. The travel from cathode to anode in straight lines

- They are effected by the electric field ie. they are inflected towards the positive field and is deflected from the negative field.

Q3. What is the difference between cathode and anode rays.

Q4 Why were anode rays also called ~~ano~~ canal rays.

1 ans. Discharge tube is a ~~is a~~ glass tube which was sealed at both ends with metal plates.

2 3ans. Anode ray	Cathode ray
Anode ray ~~can be~~ are emmited from anode	Cathode rays are emmited from cathode
They ~~can be~~ consist of ~~and~~ protons	They consist of ~~or~~ electrons.

ans 24. When E. Goldstein was performing an experimen
an experiment with a discharge tube
fitted with a perforated cathode which has
very small holes. These Gohi When electri
field was applied, the anode ray was seen
passing through the holes of perforated
cathode is (canals). ~~Why~~ This is
why ~~it is~~ anode rays are known as
cathode rays

Atomic number (Z)	Mass number (A)
number of protons in the nucleus of an element atom of an element	· It is the sum of protons and neutrons in a nucleus of an atom
In neutral atom + number of protons = no of electrons	Proton $A = P + n$ $n = A - P$

Give the symbolic representation of an element with atomic no. 20 and mass no. 40

element - x

Symbolic representation = $^{40}_{20}X$