## Level – 1

1.   Ratio of mass of P to e is 1.8×10^3

2.   Cathode rays travels in a straight light and collides with paddle when so cathode rays possen <u>kinetic energy.</u>

3.   Cathode rays are negatively charged rays so <u>they can't be a stream of positively charged particles.</u>

4.   Proton was discovered by <u>Goldstein.</u>

5. $\dfrac{e}{M}$ ratio for cathode rays is same for different gases as mass of electrons is negligible no matter whichever gas is there

6.   Mass of proton is 1.6725×10^{-24} gms

7.   Cathode rays are made up of negatively charged particles.

8.   The neutron was discoved by James chadwick

9.   Thomson model is also known as plum pudding model, watermelon model and apple pie model

10.   Nucleous are particles which reside in nucleus i.e. protons and neutronss

12.   Atom has 2 electrons in 'K shell', 8 electrons in 'L shell' and then 13 electrons in ,M shell' as it is necessary for an atom to for its all shells orderly. 2, 8, 13 is an electronic configuration of Mergansers
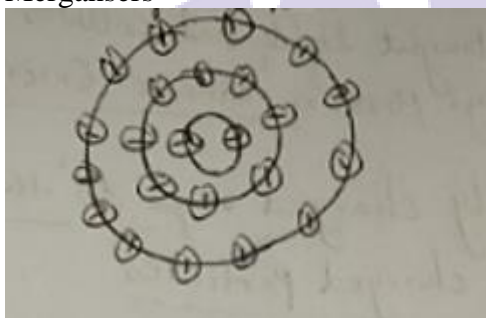
13.   In K shell atom has 2 electrons In 'L shell' atom contains 8 electrons so $20 - 12 = 8$ electrons will be accommodated in 'M shell'

25.   Isoelectronic species are species which have same number of electrons
$Na^+ \rightarrow 11 - 1 = 10$ electrons
$Ne \rightarrow 10$ electrons

30. $CH_3^+ \rightarrow (6 + 3 \times 1) - 1 = 9 - 1 = 8$ electrons
$HO^+ (3 \times 1 + 1 \times 8) - 1 = 11 - 1 = 10$ electrons
$NH_3 \rightarrow 7 + 3 \times 1 = 10$ electrons
$CH_3^- \rightarrow (6 + 3 \times 1) + 1 = 10$ electrons

36.   The formula of Hydride ion is H⁻ ion. It has 1 electrons and it has accepted 1 electron also because of negative charge so it is isoelectronic with He.

Level – 2

1.   Electrons and Protons don't have the same weight.

15.   K shell accommodates 2 electrons L shell accommodates 8 electrons so 'M shell' will accommodate 5 electrons

19.   Na+ ions has 10 electrons so it is isoelectronic with Mg^{2+} (12 – 2 = 10 electrons)

20.   No. of electrons is same as no of protons

21. $-CONH_2 \rightarrow 6+8+7+(2\times1) = 23\,\text{electrons}$

22. $Na^+ \rightarrow 11 - 1 = 10$ electrons
       $Ne \rightarrow 10$ electrons