

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

CLASS- VIII

SUBJECT- CHEMISTRY

CHAPTER- 4

TEACHER- ANAMIKA

Q:- Why do $^{35}_{17}\text{Cl}$ and $^{37}_{17}\text{Cl}$ have same chemical properties
In what respect do these atom differ?

Ans:- Because, $^{35}_{17}\text{Cl}$ and $^{37}_{17}\text{Cl}$ are isotopes and isotopes have same chemical properties as number of electrons are same. These both $^{35}_{17}\text{Cl}$ and $^{37}_{17}\text{Cl}$ have different number of neutrons.

Q:- $^{24}_{12}\text{Mg}$ and $^{26}_{12}\text{Mg}$ are symbols of two isotopes of magnesium?

a) Compare the atoms of these isotopes with respect to

- (i) the composition of their nuclei
- (ii) their electronic configuration

b) Give reason why two isotopes of magnesium have different mass number.

Ans:- a) (i) $^{24}_{12}\text{Mg}$ & $^{26}_{12}\text{Mg}$

In $^{24}_{12}\text{Mg} \rightarrow$ No. of protons = 12 and no. of neutron = 12

In $^{26}_{12}\text{Mg} \rightarrow$ No. of proton = 12 and no. of neutron = 14.

(ii) Electronic Configuration = 2, 8, 2

b) Their mass number is different because number of neutrons are different.

Q:- Element X has electronic configuration 2, 8, 18, 8, 1 without identifying X

a) Predict the sign & charge on simple ion of X.

b) Write if X will be an oxidising agent or a reducing agent - why?

Ans:- a) It is Rb and charge is $+1$, because after losing it gain noble gas configuration.

b) X is Reducing agent because after losing it attain noble gas configuration.