

TENDER HEART HIGH SCHOOL, SEC-33B, CHD.
CLASS - IX SUBJECT - CHEMISTRY
CHAPTER - 1 TEACHER - ANAMTKA

30.09.24

Good morning to all

Elements are pure substances made up of one type of atoms. In order to study elements in all organized manner.

Dobereiner, grouped the elements in three (triads)

Newland observed that, when elements are arranged in increasing order of their mass, every 8th element beginning from any element resembles the first element in its physical & chemical prop.

Mendeleev gave first periodic table of element which states that 'the properties of element are the periodic function of their atomic mass'.

Henry Moseley put forward the modern periodic table. He stated that the physical & chemical properties of element are periodic function of atomic number.

Salient Features of Modern periodic table:-

Groups:- The modern periodic table has 18 vertical columns known as groups. The elements of group 1, 2, 13, 14, 15, 16 & 17 are known as main group elements or representative elements.

Periods:-

There are 7 horizontal rows in the modern periodic table. The number of shells present in an atom determines its period.

Periodicity:- The properties that reappear after regular interval or which there is gradual variation at regular intervals are called periodic properties. The phenomenon is known as periodicity of elements.

Cause of periodicity:- The cause is recurrence of similar electronic configuration i.e. having same number of electrons in the outermost orbit.

8th Number of shells:-

- a) Down a group i.e. from top to bottom the number of shells increases one by one.

Element with atomic No.	No. of shells	Electronic Configuration			
		K	L	M	N
F(9)	2	2,	7		
Cl(17)	3	2,	8,	7	
Br(35)	4	2,	8,	18,	7

b) Across a period :- On moving from left to right the number of shells remain same.

Valency :- Valency denotes Combining Capacity of atom of element. It is equal to the number of electrons an atom can donate or accept.

Questions:-

Q:-1 Name two element that you would expect to show chemical reaction similar to Ca.

Q:-2 How does Electronic Configuration in an atom change.

a) In period from left to right

b) In group from top to bottom