

$n \rightarrow 1$ $neg \leftarrow 1 \text{ shell}$

Li $\rightarrow 2, 1$ Be $\rightarrow 2, 2$ B $\rightarrow 2, 3$ C N O F Ne $\rightarrow 2 \text{ shells}$

$\downarrow \downarrow \downarrow \downarrow \downarrow$
 2, 4 2, 5 2, 6 2, 7 2, 8

Na \downarrow Mg \downarrow
 2, 8, 1 2, 8, 2

Ar $\rightarrow 3 \text{ shells}$
 2, 8, 8

K
 2, 8, 8, 1

Modern Periodic Law:

Properties of elements are periodic functions of their atomic number.

Question

What are advantages of classification of elements?

Answer

- i) To study the elements in a systematic manner.
- ii) To co-relate the properties of elements.
- iii) To know the type of different compounds that different elements can form.

Question

What is the basic difference between Mendeleev's periodic table and Modern periodic table.

Answer:

Mendeleev's P.T

Modern P.T

i) Periodic properties are related to atomic mass.

i) Periodic properties of elements are related to atomic number

ii) It had 8 groups and 6

ii) It has 18 groups and 7

ii) It had 8 groups and 6 periods

iii) It has elements with dissimilar properties in the same group at some places

iv) It does not have place for isotopes

v) It doesn't support concept of atomic structure

ii) It has 18 groups and 7 periods.

iii) It has no such defects.

iv) As it is based on atomic number, all isotopes of an element are placed at same place

v) It supports the concept of atomic structure.

Question:

Why are Lanthanides and Actinides given a separate position in modern periodic table?

Answer:

To prevent periodic table from becoming way too wide.