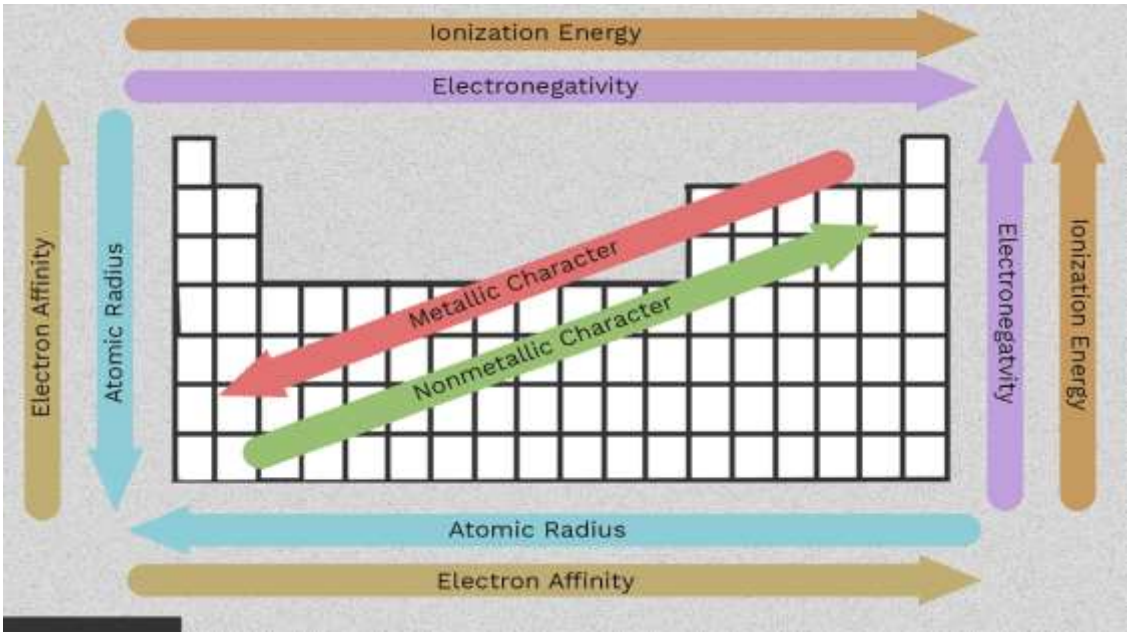
CHAPTER - 5 PERIODIC PROPERTIES

NOTES (QUESTION – ANSWER FORM)

Trends in Periodic Table



Section –A (Short Answer Type questions Each Question Carry Two Marks)

Q. Explain the trend of Ionization energy in the periodic table from left to right?

Ans. Ionization energy increases from left to righton the periodic table. Another factor that affectsionization energy is electron shielding. Electron shielding describes the ability of an atom's inner electrons to shield its positively-charged nucleus from its valence electrons.

Q. Define ionization energy?

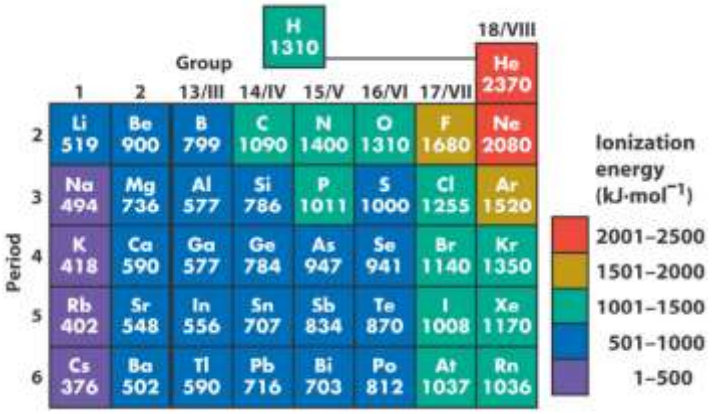
The ionization energy (IE) of an atom is the minimum energy required to remove an electron from a gaseous atom.

X(g) X+(g) + e

The first ionization energy IE1 is the energy required to remove the first electron from the atom. The second ionization energy IE2, is the energy required to remove the second electron from the +1 positive ion of the atom and so on.

Let's take a look at some experimental data: Periodic trends ionization energies of the representative elements:

Correlations across and down:



Long answer type question

Q.1 what is effective nuclear charge? Calculate effective nuclear charge of F and F^- ?

Q.2 Explain Atomic radius (Covalent and Ionic radius) and their variation with in a periodic table.

Home Work

Q.1 Which one is having bigger size Sodium atom or Sodium Cation and Why.

Q.2 Arrange the following according to their Size. Give reasons.

Li^+ Na^+ K^+ Rb^+ Cs^+