

A PERIOD OF PERIODICITY!

Unstable -- higher energy state
Stable – lower energy state

- The dominant factor in determining the variation in size of successive atoms in a family is the:
 - increase in nuclear charge
 - increase in number of valence electrons
 - decrease in the radii of electron shells
 - increased shielding effect
- The largest contributing factor to the increase in ionization energy within a period is :
 - nuclear charge
 - valence electrons
 - inner shell electrons
 - shielding effect
- As the atomic numbers of halogens increase, their ionization energy:
 - decreases
 - increases
 - remains the same
 - breaks
- Ions formed by the loss of an electron are always more _____ than the atom they came from.
 - stable
 - unstable
 - electronegative
 - I can't tell because I don't know what the atom is.
- Elements within a series generally attract electrons _____ with increasing atomic number.
 - more
 - less
 - about the same
- Atom size goes down **as you move up a family** because of:
 - increasing number of protons
 - increasing shielding effect
 - relatively constant shielding effect
 - decreasing shielding effect
- What is the most probable oxidation state of Ba?
 - 3
 - +2
 - 2
 - 0
- You do an experiment which involves adding an electron to an atom. You make the following assumption in regard to its stability:
 - the ion is more stable
 - the ion is less stable
 - the stability doesn't change
 - You can't tell what happened because this statement doesn't give enough information.
- In most cases, the successive electrons of the transition elements of the fifth series occupy the _____ energy level.
 - 1st
 - 2nd
 - 3rd
 - 4th
 - 5th
- Which of the following elements is **least** metallic?
 - oxygen
 - sulfur
 - arsenic
 - selenium

11. Which of the following has the **largest** atomic radius? a. nickel b. scandium c. iron d. zinc
12. Low electronegativity is characteristic of: a. metals b. non-metals c. gases d. liquids
13. Elements with similar characteristics are found in: a. families b. periods c. metals d. a and b
14. Which of following pairs would have the **greatest difference** in electronegativity?
a. Cl and O b. K and Cl c. Ti and F d. I and F
15. Which of the following trends have the same pattern as ionization energy?
a. electronegativity b. atomic radius c. activity d. a and b e. none of these
16. The energy change when a single electron is added to an atom is called:
a. electron affinity b. electronegativity c. ionization d. none of these
17. The greatest increase in ionization energy for the element Al comes between which two electrons?
a. 2nd and 3rd b. 3rd and 4th c. 1st and 2nd d. none of these
18. If energy is required for a process, the resulting particle is:
a. more stable b. less stable c. about the same d. irrelevant
19. An element which lost energy during an electron transfer:
a. gained an electron b. lost an electron
c. lost a proton d. there is insufficient information to answer this question.
20. Which of the following elements would you expect to have a negative electron affinity?
a. B b. K c. O d. F e. all of these
21. Which element would form an ion which is isoelectronic with Ne and would bond with oxygen in a 2:3 ratio:
a. F b. Na c. Mg d. Al