

Inorganic Chemistry

A)

- 1- What are the quantum numbers for the last electron in $3d^7$
- 2- What is meant by Exchange energy?

B)

- 1- Write the electronic configuration for 18Ar
- 2- What is meant by Lewis structure?

C)

- 1- What are the quantum numbers for the last electron in $4s^2$
- 2- What is the difference between valence and core electrons

D) Calculate shielding effect and effective nuclear charge on the last electron in 28Ni , 14Si

E) Arrange the following according to increasing effective nuclear charge and give the reason for your arrangement:

6C , 8O , 10Ne

F) Arrange the following according to increasing shielding effect on valence electrons:

4Be , 12Mg , 20Ca

G) Arrange the following according to increase in atomic radii and give the reason for your arrangement

Na , Na^+ , K

Note: Atomic weights: $\text{Na} = 10$, $\text{K} = 19$