

Electronic Configuration Questions

name:

1. Sketch and complete the orbital diagram for the following atoms on your own paper: $_{17}\text{Cl}$, $_{26}\text{Fe}$, and $_{38}\text{Sr}$.

2. Write the complete electronic configuration for the following species:

$_{40}\text{Zr}$

$_{28}\text{Ni}$

$_{82}\text{Pb}$

$_{35}\text{Br}$

$_{105}\text{Db}$

$_{79}\text{Au}$

3. What are valance electrons?

4. How many valance electrons do each of the following atoms have:

S

K

I

Fe

N

Mg

5. Draw the dot structures for the following atoms.

S

K

I

Fe

N

Mg

6. What ionic charge would you expect the following atoms to have?

S

K

I

Fe

N

Mg

5. Write the complete electronic configuration for the following:

Br^-

Ca^{2+}

P^{3-}

Zn^{+2}

Cr^{+5}

6. Why are the nobles gases (VIIIA) so unreactive ?

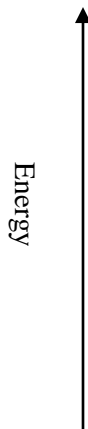
7. Why does calcium tend to form Ca^{2+} and not Ca^+ cations?

7. What ion should Br tend to form? Justify your answer.

Note: Be able to write the electronic configuration for any given element or ion from the periodic table.

Electronic Configuration Quiz

7. Sketch an orbital diagram for ${}_{15}\text{P}$.



8. Write the complete electronic configuration for the following species:

${}_{40}\text{Zr}$ _____

${}_{86}\text{Rn}$ _____

3. Identify the valence electrons found in :

Al _____ Ba _____ Fe _____ Br _____

8. Write the complete electronic configuration for the following:

S^{2-} _____

V^{2+} _____

6. Why does chlorine tend to form Cl^- and not Cl^{2-} anions ?