

Name: Key

Block: \_\_\_\_\_

Date: \_\_\_\_\_

Chemistry 11

**Electron Configuration Worksheet Key**

Assignment

(46 marks)

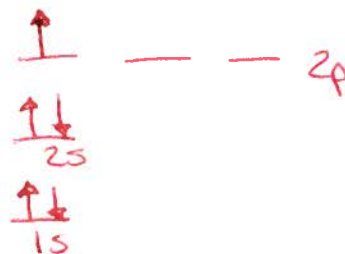
Complete the following questions on a separate piece of paper.

1) Draw the energy level diagrams for the following atoms. (5 marks)

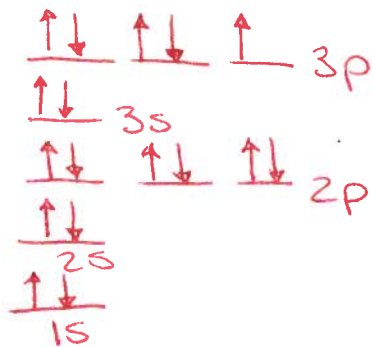
a. C =  $6e^-$



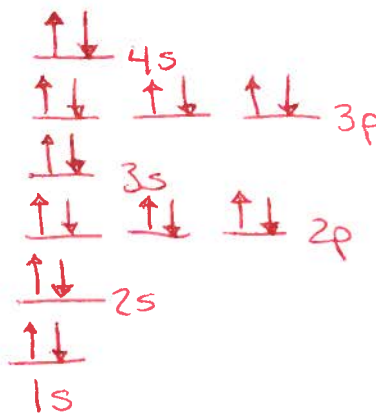
d. B =  $5e^-$



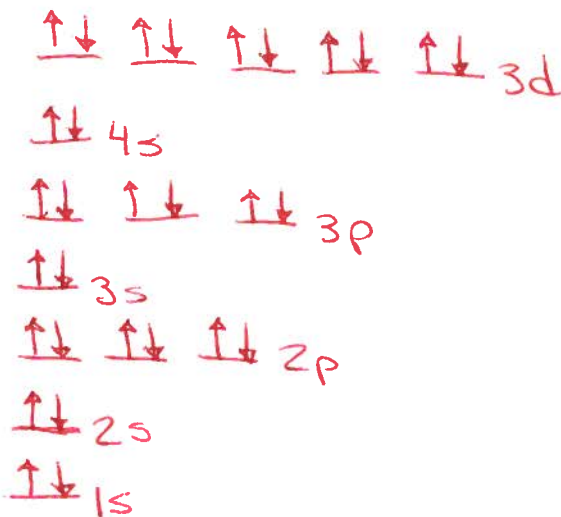
b. Chlorine =  $17e^-$



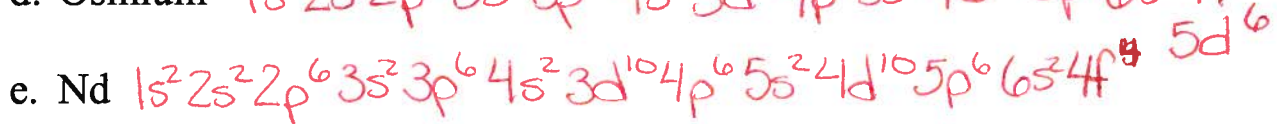
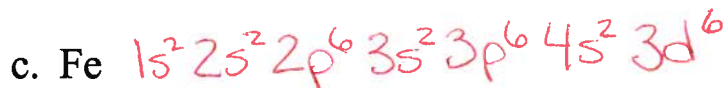
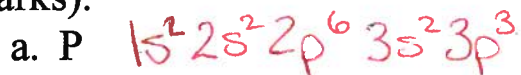
e. Ca =  $20e^-$



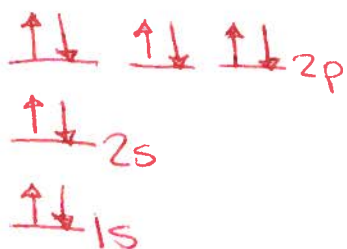
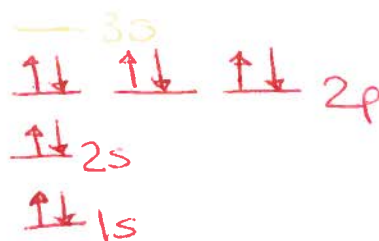
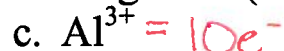
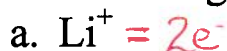
c. Zn

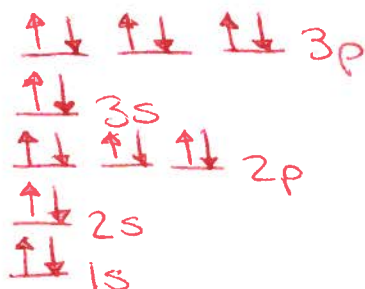


2) Write the electron configurations for the following atoms (8 marks).

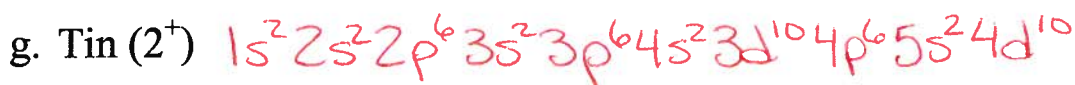
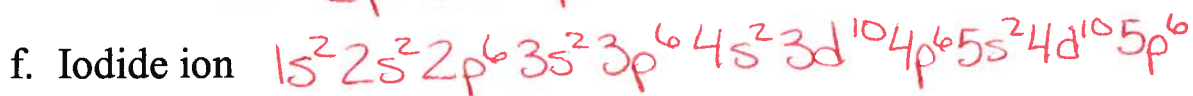
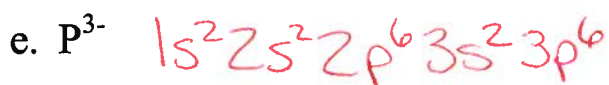


3) Draw the energy level diagrams for the following ions. (5 marks)





4) Write the electron configurations for the following ions. (8 marks)



5) Using core notation, write the electron configurations for the following atoms and ions. (10 marks)





6) How many valence electrons are in each of the atoms/ions from #5? (10 marks)

a. K 1

b.  $\text{O}^{2-}$  0

c. Cr 6

d. V 5

e. Calcium 2

f. Tellurium 6

g. Xe 0

h. Hg 2

i.  $\text{Cl}^-$  0

j.  $\text{Zn}^{2+}$  0