

Participation Assignment

CHEM 1090-General Chemistry I

Name:

#16

Section: 33, TR

Due Date: Thursday 2/28/2019

1. Write complete orbital diagrams for the following:

a. H

d. C

b. He

e. O

c. B

f. Ne

2. Write valence orbital diagrams for each of the following:

a. fluorine atom

c. fluoride ion

b. sulfur atom

d. sulfide ion

3. Write shortcut electron configurations for each of the following:

a. zinc ion

b. silver ion

4. Lewis Structure Rules

1. Arrange the surrounding atoms about the central atom.
 - a. Hydrogen is not the central atom.
 - b. The least electronegative atom is the central atom.
 - c. Oxygen is not the central atom for an oxoacid.
2. Determine the total number of valence electron pair.
3. Bond the surrounding atoms to the central atom.
4. Follow the octet rule (4 pair of electrons) for the surrounding atoms.
 - a. Hydrogen only has one bond.
5. Place any remaining electron pair around the central atom.
6. If the central atom has fewer than four pair of electrons, make multiple bonds to satisfy the octet rule.
7. Check formal charges and if needed adjust the Lewis structure.