

## Review - Nomenclature and Lewis Diagrams

1.) Write the proper formula for the chemical names below.

a.) sodium oxide \_\_\_\_\_

b.) lithium hydroxide monohydrate \_\_\_\_\_

c.) lead (II) nitride \_\_\_\_\_

d.) Potassium sulphide \_\_\_\_\_

e.) tin (IV) telluride \_\_\_\_\_

f.) Nitric acid \_\_\_\_\_

g.) barium bisulphide tetrahydrate \_\_\_\_\_

h.) dinitrogen monoxide \_\_\_\_\_

2.) Write the correct name for the following compounds.

a.)  $\text{CuO}$  \_\_\_\_\_

b.)  $\text{V}_3\text{N}_5$  \_\_\_\_\_

c.)  $\text{NH}_4\text{ClO}_4$  \_\_\_\_\_

d.)  $\text{Pt}_2\text{O}_3 \cdot 3\text{H}_2\text{O}$  \_\_\_\_\_

e.)  $\text{Cl}_2\text{O}$  \_\_\_\_\_

f.)  $\text{HF}$  \_\_\_\_\_

g.)  $\text{I}_2\text{O}_5$  \_\_\_\_\_

3.) Draw the Lewis structure for each of the following molecules:

a.)  $\text{H}_2\text{S}$

b.)  $\text{SO}_3$

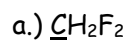
c.)  $\text{CH}_2\text{Br}_2$

d.)  $\text{HCN}$

4.) Draw the Lewis diagram for each of the following polyatomic ions:



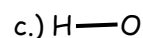
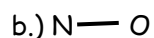
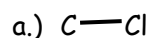
5.) Draw the Lewis structure for the following molecules or ions.



6.) For each of the bonds below:

i.) Use delta notation ( $\delta^+$  and  $\delta^-$ ) to indicate which atom is more electronegative

ii.) Use an arrow to point from the less electronegative atom to the more electronegative atom.



7.) Identify the type of bond described for each of the following as ionic, polar covalent, nonpolar covalent, or metallic.

\_\_\_\_\_ a.) the  $\text{C}—\text{O}$  bonds in  $\text{CO}_2$

\_\_\_\_\_ b.) The bonds in  $\text{F}_2$

\_\_\_\_\_ c.) the bonds in  $\text{K}_2\text{O}$

\_\_\_\_\_ d.) The  $\text{C}—\text{C}$  bonds in  $\text{C}_3\text{H}_8$

\_\_\_\_\_ e.) the bonds in Ba

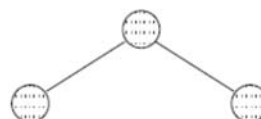
\_\_\_\_\_ f.) The bonds in  $\text{H}_2\text{O}$

8.) Determine whether the following five molecules are polar or nonpolar:

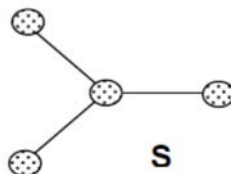
$\text{CO}_2$ :



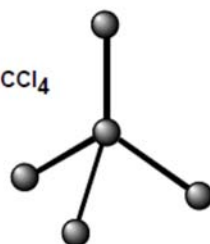
$\text{H}_2\text{O}$ :



$\text{SO}_3$



$\text{CCl}_4$



$\text{CHCl}_3$

