**Quiz 5A**

# Directions: Answer each of the following questions. Be sure to use complete sentences where appropriate. For full credit be sure to show all of your work. Where appropriate answers should be boxed for clarity, written to the correct number of significant figures, and, include the proper units.

1. Answer the following questions about the structure below (8 points).



* 1. What is the chemical formula? \_\_HNO\_\_\_\_\_
  2. How many bonded electrons are represented? \_\_\_6\_\_
  3. How many nonbonded electrons are represented? \_\_\_6\_\_
  4. What is the electron pair geometry? \_\_trigonal planar\_\_\_\_
  5. What is the molecular geometry? \_\_\_bent
  6. What is the H-N-O bond angle? \_\_<120°
  7. Is the molecule polar or nonpolar? \_\_polar\_\_\_\_\_

1. If an atom has a filled octet, it has eight electrons in its valence level. What two energy sublevels are filled in a complete octet (2 points)?

The s and p sublevels are filled.

1. Complete the following table (10 points)

|  |  |  |
| --- | --- | --- |
| Name | Covalent or Ionic Compound | Formula |
| Copper(II) fluoride | Ionic | CuF2 |
| Dinitrogen trioxide | Covalent | N2O3 |
| Magnesium sulfate | Ionic | MgSO4 |
| Sodium phosphite | Ionic | Na3PO3 |
| Tetraiodine nonaoxide | Covalent | I4O9 |