

CHM 1020  
Homework for Part V

1. Draw the Lewis structures for these substances.
  - a. HCl
  - b. H<sub>2</sub>O
  - c. CO<sub>2</sub>
  - d. CO
  - e. NH<sub>3</sub>
  - f. CH<sub>4</sub>
  - g. C<sub>2</sub>H<sub>2</sub>
  - h. C<sub>2</sub>H<sub>4</sub>
  - i. C<sub>2</sub>H<sub>6</sub>
  - j. CH<sub>2</sub>O
  - k. NO<sub>3</sub><sup>-</sup>
  - l. NH<sub>4</sub><sup>+</sup>
  - m. CN<sup>-</sup>
2. What is the "shape" and the bond angles for each of the molecules in question #1 as predicted by VSEPR theory? (d & m have no central atoms)
3. Which molecules have one or more polar bonds in a-j in question #1
4. Name the following covalent compounds.
  - a. CCl<sub>4</sub>
  - b. CO
  - c. CO<sub>2</sub>
  - d. SO<sub>3</sub>
  - e. PCl<sub>5</sub>
  - f. NO<sub>2</sub>
  - g. N<sub>2</sub>O<sub>4</sub>