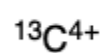
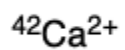


CHEM 2300 SI Session 1

1. List the number of protons, neutrons, electrons, atomic number, and atomic weight in each atom.



2. Write out the valence orbital diagram for
 - a. Carbon that has gained 4 electrons
 - b. Fluorine
 - c. Beryllium that has lost 1 electrons

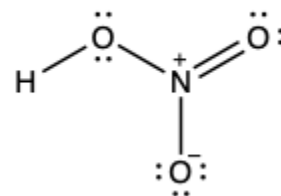
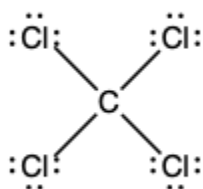
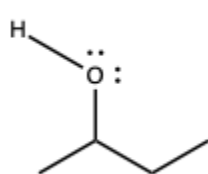
3. Draw the most stable lewis dot structure for



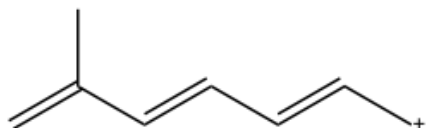
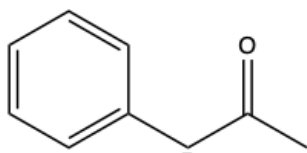
4. Give the valence electrons and valence for carbon, nitrogen, hydrogen, bromine, oxygen, and sulfur. What does this say about how many bonds each of these atoms want?

5. Draw four structural isomers for $\text{C}_3\text{H}_6\text{O}$

6. Show bond polarities and whether the compound is polar or nonpolar



7. Draw all the resonance structures, including the formal charge of each atom (unless neutral). Then state which is the most stable and why (make sure to include arrows to show how each resonance structure was made).



8. Name the function groups

