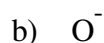


1. (0.3 pt) Indicate the number of  $p^+$ ,  $e^-$ , and valence  $e^-$  for the following Then draw Lewis structures and write "stable" or "not stable" after the structure as would be predicted by the Lewis Octet Rule.#

$p^+$     #  $e^-$     # valence  $e^-$                       Lewis Structure                      Stable???



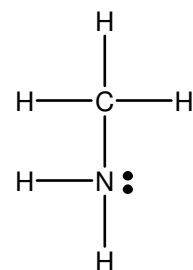
2. (0.3 pt) Indicate the total valence  $e^-$  number and draw Lewis structures for the following molecules or compound ions. For the examples that are larger than diatomic, the central atom in each structure is underlined.



valence  
 $e^-$  #

Lewis  
Structure

d) (0.1 pt) What is the orbital hybridization of the carbon atom in the structure to the right?



3. Write an electronic configuration (0.1 pt) and fill in an energy level diagram (0.2 pt) for a Zn (zinc) atom. (If you want to save paper, you can write your answer for the energy level diagram on the back of the page.)