

1. a. Draw the Lewis structure for carbon monoxide (CO). (4 pts)



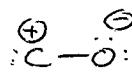
- b. Draw the three *reasonable* resonance structures for carbon monoxide. Circle the best one (i.e., the most significant contributor) and **briefly explain** your reasoning. (8 pts)



full octet
on everything,
but charges



unfilled octet
on C



unfilled octet
on C, & charges

- c. How many σ bonds does carbon monoxide have? (2 pts) 1

- d. How many π bonds does carbon monoxide have? (2 pts) 2

- e. What is the hybridization of the C atom in carbon monoxide? (2 pts) sp

- f. What is the hybridization of the O atom in carbon monoxide? (2 pts) sp