

Unit 2 Bonding FRQ set 2

Question \_\_\_\_

Name: \_\_\_\_\_

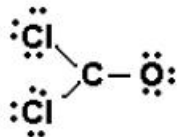
a) The following questions deal with  $C_2H_2$  and  $C_2H_6$ .

I. Draw Lewis structures for  $C_2H_2$  and  $C_2H_6$ .

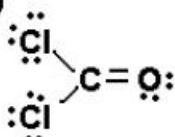
II. In which structure is the bond energy in the C – C bond greatest? Justify your answer.

b) Find the formal charge on each atom in each of the structures below.

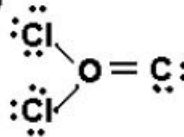
1)



2)



3)



c) What is the most likely structure in part (b)? Justify your answer.

d) The questions below deal with the following structures: (BeS and MgS)

I. Draw representations of both solids that show the relative differences in the sizes of the four particles and the ratio of one particle to another in each solid.

II. Which compound has the highest melting point? Justify your answer.

e) The following questions pertain to the space-filling diagram of  $\text{CH}_4$ , which is shown below.



I. Describe one aspect that this model represents accurately/well.

II. Describe one aspect that this model does not represent accurately/well.