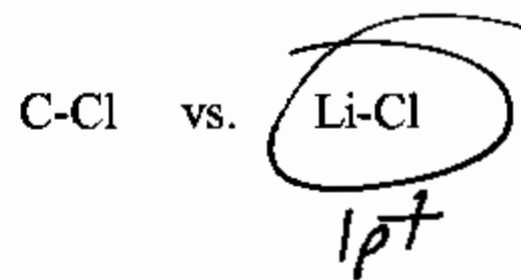
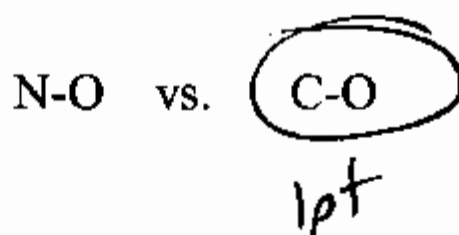
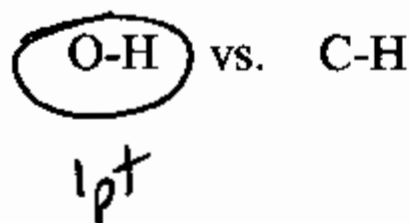


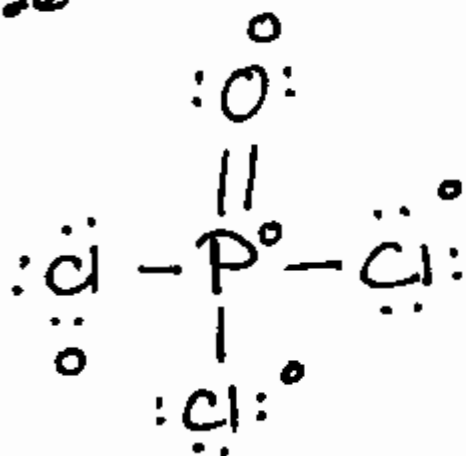
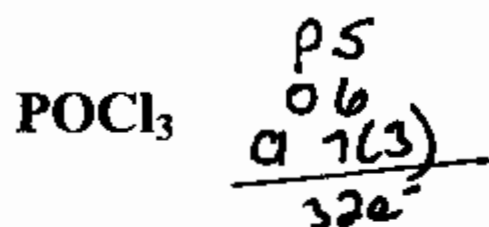
Quiz 5A
11 points

Name KEY
Maleckar/960/Fall 2009

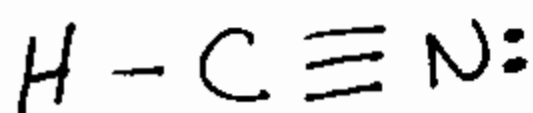
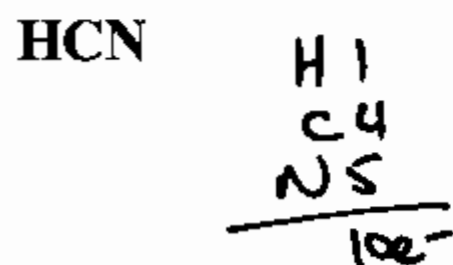
1. Circle the bond in each pair that is more polar.



2. Draw the BEST Lewis structures for the following compounds. Also calculate the formal charges and write them beside the atoms.



3pts - structure
1pt - formal charges

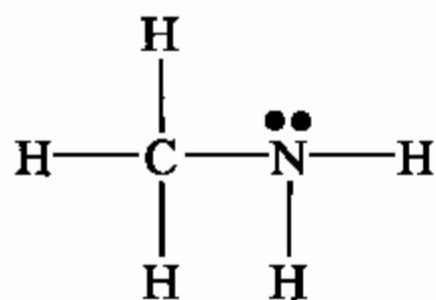


3pts - structure
1pt - formal charges

Quiz 5B
11 points

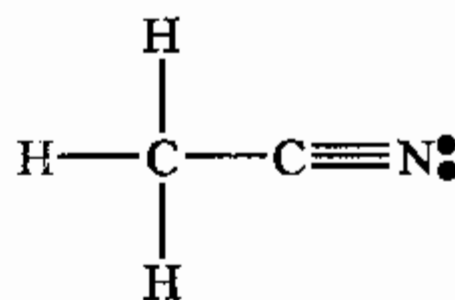
Name KEY
Maleckar/960/Fall 2009

1. One of the following compounds has a carbon-nitrogen bond length of 116pm; the other has a carbon-nitrogen bond length of 147pm. Match a bond length with each compound.



methylamine

bond length = 147 pm



acetonitrile

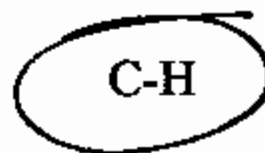
bond length = 116 pm

2pts.

2. Circle all bonds that you would expect to be nonpolar covalent. Put an X over the ionic bonds. Do nothing to those that are polar covalent.



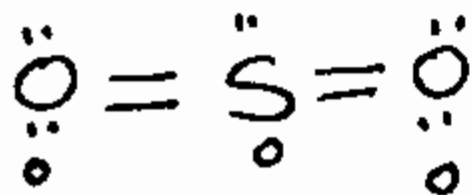
O-H



1pt each

3. Draw the Lewis Dot structure for SO₂. Give formal charges for all of the atoms.

$$\begin{array}{r} \text{S } 6 \\ \text{O } 6(2) \\ \hline 18e^- \end{array}$$



3pts - structure
1pt - formal charges

Quiz 5C
11 points

Name KEY
Maleckar/960/Fall 2009

1. Rank the following compounds in terms of lattice energy, giving a "1" to the compound having the greatest lattice energy.

MgCl₂

2

NaCl

3

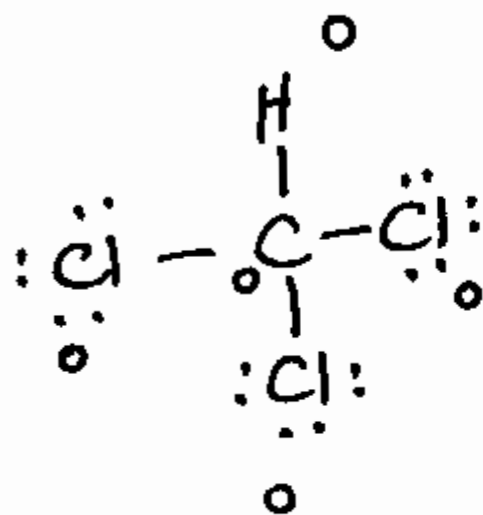
MgF₂

1

3pts

2. Draw the Lewis dot structure for CHCl₃. Give the formal charges for all of the atoms.

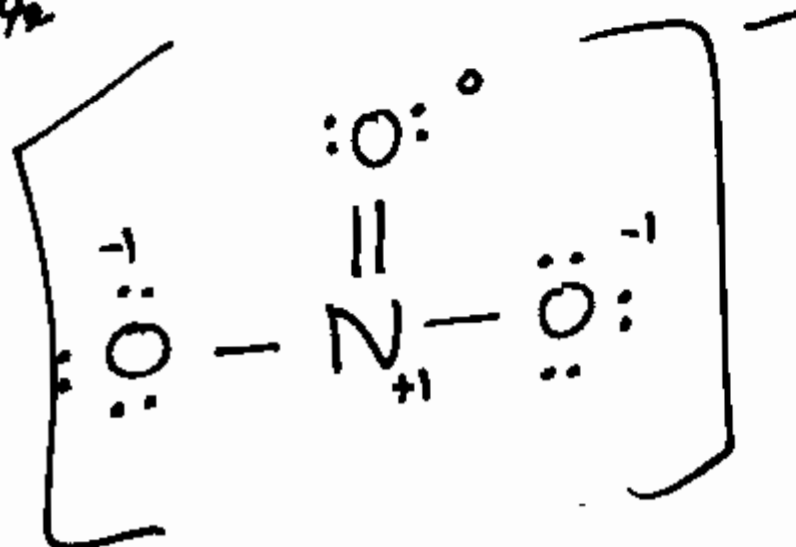
20e⁻



3pts - structure
1pt - formal charges

2. Draw the best Lewis structure for NO₃⁻. Give the formal charges for all of the atoms.

24e⁻

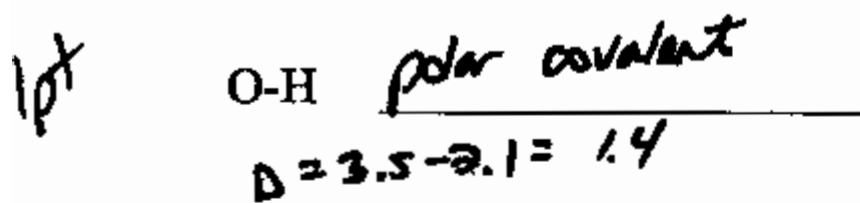


3pts - structure
1pt - formal charges

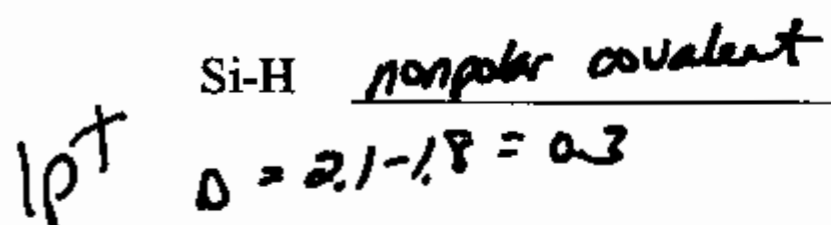
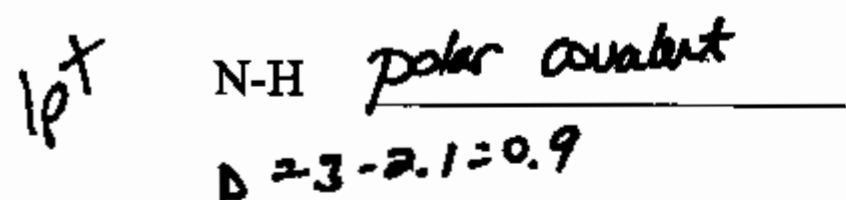
Quiz 5D
11 points

Name KEY
Maleckar/960/Fall 2009

1. Using the electronegativity data given below, evaluate the bonds below and indicate if the following bonds are ionic, polar covalent, or nonpolar covalent.



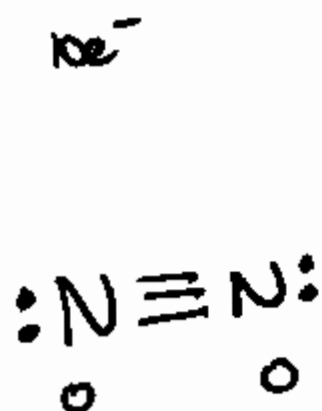
H	2.1
N	3.0
O	3.5
Si	1.8



2. Rank these compounds in terms of lattice energy, giving a "1" to the one with the greatest lattice energy.

KCl	CsCl	KF	CsI	
2	3	1	4	4pts.

3. Draw the Lewis structure for N₂. Also give formal charges for all of the atoms.

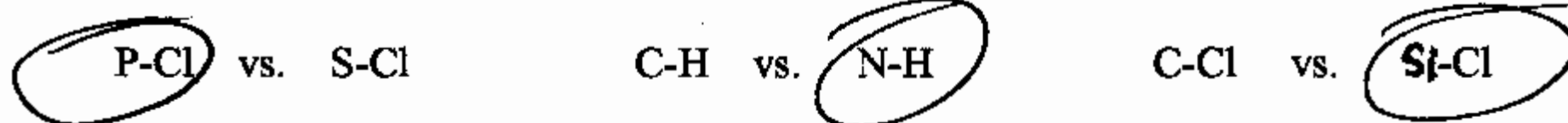


3pts - structure
1pt - formal charges

Quiz 5E
11 points

Name KEY
Maleckar/960/Fall 2009

1. Circle the bond in each pair that is **more polar**.

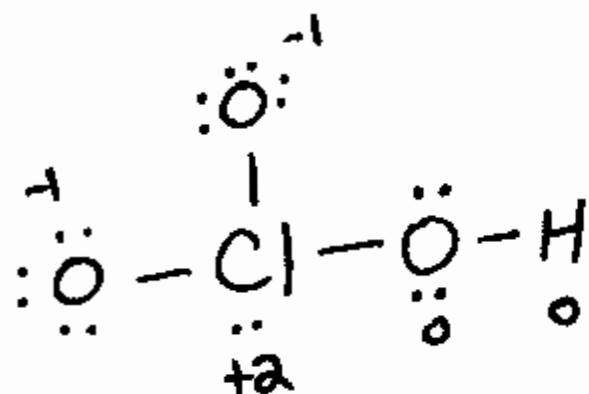


1pt each

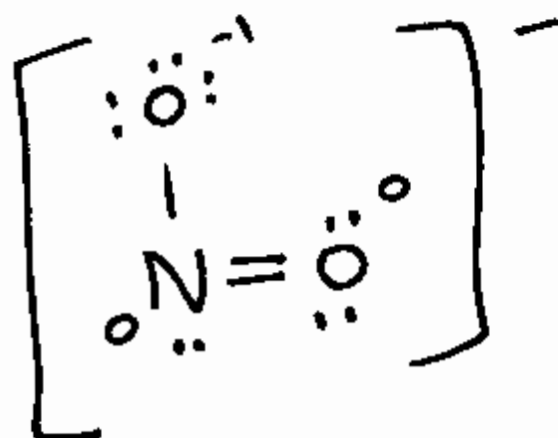
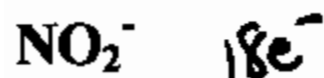
2. Draw the BEST Lewis structures for the following compounds. Also calculate the formal charges and write them beside the atoms.



26e⁻



3pts - structure
1pt - formal charges



3pts - structure
1pt - formal charges