

Bliss Chang
CH 235 SI

Electron Configurations

Draw the energy level diagram for phosphorus. This will help to visualize and put meaning into quantum numbers n, l, m_l, m_s .

Write the electronic configuration of the following:

P

As

Cr

Cu

* Test taking tip:

Lewis Dot Structures

Use the following rules to draw Lewis structures:

1)

2)

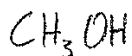
3)

4)

5)

* Test taking tip:

Draw Lewis Dot Structures for:



Formal Charge

$$\text{F.C.} = \# \text{ valence} - \# \text{ bonds} - \# \text{ lone } e^-$$

* Test tip \rightarrow Shortcut:

How to make each atom as happy as possible with its formal charge:

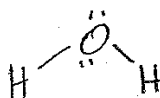
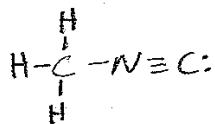
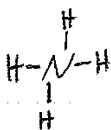
1)

2)

3)

4)

Assign formal charges to the following:



Bonds + Hybridization

σ bonds \rightarrow

π bonds \rightarrow

Regions of e^- density \rightarrow

Hybridization

areas e^- density

* Test taking tip:

s

sp

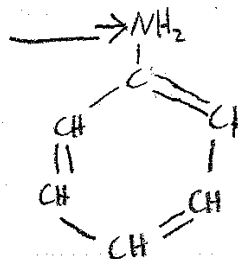
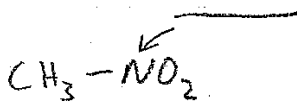
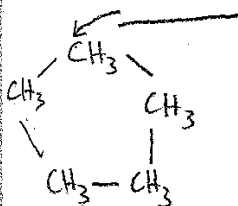
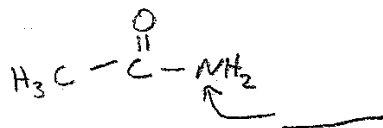
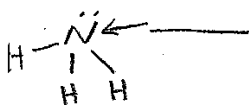
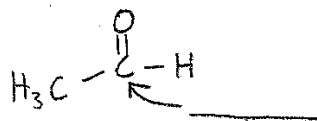
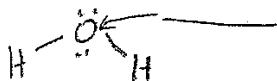
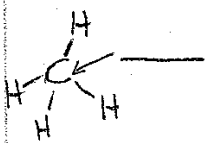
sp²

sp³

sp³d

sp³d²

Assign a hybridization to each atom indicated:

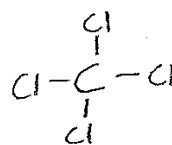
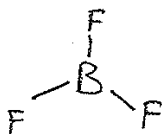


Bond Polarity

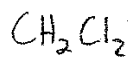
Bond polarity exists when...

* Inductive Effect:

Draw any dipoles within the following molecules:



Determine if the following have net dipole moments:



* Test taking tip!