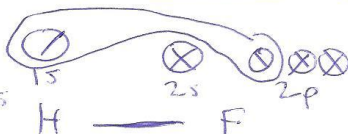
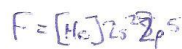
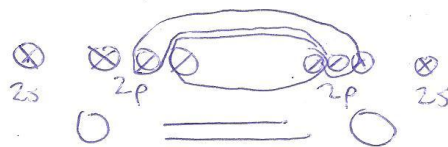
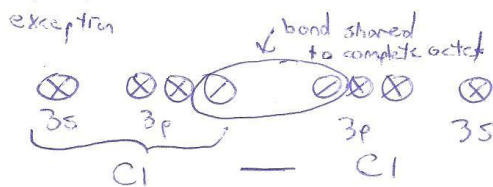


# HW #9 p 209 #1-5, #7-8, #13-21

- ① A link between atoms resulting from the mutual attraction of the nuclei to the opposing atoms electrons.
- ② Ionic →  
Covalent → look these up in the book or online  
Metallic →
- ③ The more ~~similar~~ <sup>different</sup> the electronegativity the more ionic.
- ④ polar → a "+" and "-" side to a bond or molecule  
the electrons are unevenly distributed in the bond
- ⑤ If they have incomplete octets, they will empty or fill their valence shell to become more stable.
- ⑦ Look at the periodic table. The closer the atoms the more covalent.  
The further apart, the more ionic.

$E < C < D < B < A < G < \overset{B}{\cancel{E}}$  } These can be calculated, but we will not do this in class



(13) A free pair of electrons that do not form a bond

(14) Noble gas have completed s & p subshells for a total of 8 valence electrons

(15) (A)  $H=1$  (B)  $F=7$  (C)  $Mg=2$  (D)  $O=6$  (E)  $Al=3$  (F)  $N=5$  (G)  $C=4$

(16) The least electronegative is usually in the middle, except Hydrogen - never in the middle or Carbon → which is always in the middle.

(17) Single bond - two  $e^-$   $H-F$   
double bond - 4  $e^-$   $O_2$   $O=O$   
triple bond - 6  $e^-$   $N_2$   $N \equiv N$

(18) Not enough electrons (valence) for single bond & a octet. So you need unshared pairs to make extra bonds

(19) (a)  $Li$  (b)  $Ca$  (c)  $Cl$  (d)  $O$  (e)  $C$  (f)  $P$  (g)  $Al$  (h)  $S$

