Bonding & Nomenclature Review

1) Ionic Bonding

(A) What 2 types of elements form ionic bonds and how?

(B) Draw e^- dot diagrams to show the formation of an ionic bond between these atoms below. Don't forget to include the charges formed.

(1) Na & Cl

(2) Ca & Br

(3) Al & N

(4) Mg & P

(C) List at least 3 properties of ionic compounds

2) Covalent Bonding

(A) what types of elements form covalent bonds and how?

(b) Draw Lewis structures to show the formation of a covalent bond in these molecules.

(1) NH_3

(2) CCl_4

(3) SO_3 * Draw resonance structures too!

(4) O_3

(5) H_2O

(6) $C_4H_{10}O$

(c) List at least 3 properties of covalent compounds.

3.) metallic Bonding

(A) what types of elements form metallic bonds?

(B) what is meant by a "sea of electrons"?

(C) what is an alloy and give 2 examples.

(D) what is a substitutional alloy? what is an interstitial alloy?

4) Nomenclature

(A) Determine if the following compounds are type I, type II, type III, a hydrocarbon, binary acid, or oxyacid

(1) $Rb_2C_2O_4$
(2) AsO_3
(3) HI
(4) C_6H_{12}
(5) UF_6
(6) $HC_2H_3O_2$
(7) $Ba(HSO_4)_2$
(8) H_2S
(9) CS_2
(10) $Au_2(Cr_2O_7)_3$
(11) perchloric acid
(12) hydrogen peroxide
(13) lead (IV) sulfite
(14) nitrous acid
(15) silicon dioxide
(16) nickel (II) sulfide
(17) gallium phosphate
(18) lithium permanganate
(19) hydrofluoric acid
(20) nitrogen trichloride

(B) From 4(A) above, write the name for #1-10 and write the formula for #11-20.