**Ionic and Polyatomic Assignment – Due: December 22, 2016**

**Section 5.8 and 5.9**

1. Multiple Choices – CIRCLE ONE CORRECT ANSWER – Value 5

1. Ionic bonds are generally formed between:

(a) two different gases.

(b) metals and the nonmetals

(c) alkaline earth metals and the noble gases.

(e) two different metals.

2. Which of the following ions (#1 to 5 below) have the same **number of electrons** as the **noble gas neon (Ne)**?

**1. K+1 2. F-1 3. Mg+2  4. S-2 5. O-2**

(a) 2, 3, and 5 only

(b) 1 and 2 only

(c) 3, 4, and 5 only

(d) 2 only

(e) 1 and 4 only

3. Atoms of element A have 2 electrons in their last occupied orbit (*charge of positive two*). Atoms of element B have 7 electrons in their last occupied orbit (charge of negative 1). The formula of the compound formed between A and B is:

(a) A2B

(b) AB2

(c) AB3

(d) A7B2

(e) AB5

4. Which of the following polyatomic ions have names that end in "ate"?

1. ClO3‑

2. OH‑

3. PO43‑

4. HCO32‑

5 SO32‑

(a) 2, 3, and 4 only

(b) 2, 3, and 5 only

(c) 1 and 5 only

(d) 1, 2, 4, and 5 only

(e) 1, 3, and 4 only

5. Select which of the following has the correct corresponding name.

(a) Sn2SO4 – tin (II) sulfate;

(b) PbCO3 – lead (IV) carbonate;

(c) Fe(ClO3)3 ‑ iron(III) chlorate;

(d) Cu2PO4 – copper (I) phosphate.

1. Complete the following using the **periodic table** and **textbook** (charges/names of gases on page 194 or on handout provided) to complete the following.
2. Give the **compound name** or **formula** as required. Value 12
3. AlBr3 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Ag2O Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. ZnF2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. lithium iodide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. potassium phosphide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. magnesium hydride Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. Give the *compound name* OR *formula* as required. Value 12
10. CaCl2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. Sr3P2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. BaI2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. aluminum nitride Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
14. zinc sulfide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
15. potassium bromide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
16. Give the *compound name* OR *formula* as required. NOTE: Most common/least common charge may be used in the following. Value 12

1. SnF4 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Fe2O3 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Cu2S Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. iron(II) bromide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. copper(I) nitride Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. lead(IV) oxide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Polyatomic Compounds**

1. Give the *compound name* **OR** *formula* as required. Value 24
2. AgNO3 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Pb(ClO3)2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. CaSO4 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. K3PO4 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Sn(NO3)2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. Cu(OH)2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
8. potassium sulfate Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
9. lead(IV) carbonate Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
10. magnesium carbonate Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. calcium hydrogen carbonate Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
12. copper(II) sulfate Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. iron(II) hydroxide Formula: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_