Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 3a

Dr. Cary Willard February 27, 2013

1. (4 points) Explain the difference between a molecule and a formula unit. (Include information regarding the types of compounds that form each and why they do.)

Molecules are discrete particles, generally composed of non-metals, which are covalently bonded together. Formula units a unit of an ionic compound with balanced positive and negative charges. They are described as formula units because it is impossible to assign each ion to a specific unit or molecule? Formula units are composed of ions, generally a metal and a non-metal.

1. (3 points) Write the names of the following ions
   1. Na+ sodium ion
   2. Cr3+ chromium(III) ion
   3. S2- sulfide ion
2. (3 points) Write the formulas for the following ions
   1. Zinc ion Zn2+
   2. Fluoride ion F–
   3. Cupric ion Cu2+
3. (6 points) Give the correct IUPAC names for the following compounds
   1. HI hydroiodic acid or hydrogen iodide
   2. P2Cl5 diphosphorus pentachloride
   3. Ni2O3 nickel(III) oxide
4. (4 points) Write the correct formula for each of the following compounds
   1. Barium phosphide Ba3P2
   2. Titanium(IV) bromide TiBr4

Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 3b

Dr. Cary Willard February 27, 2013

1. (4 points) Explain the difference between a molecule and a formula unit. (Include information regarding the types of compounds that form each and why they do.)

Molecules are discrete particles, generally composed of non-metals, which are covalently bonded together. Formula units a unit of an ionic compound with balanced positive and negative charges. They are described as formula units because it is impossible to assign each ion to a specific unit or molecule? Formula units are composed of ions, generally a metal and a non-metal.

1. (3 points) Write the names of the following ions
   1. Zn2+ zinc ion
   2. Ni2+ nickel(II) ion
   3. P3- phosphide ion
2. (3 points) Write the formulas for the following ions
   1. Potassium ion K+
   2. Iodide ion I–
   3. Cuprous ion Cu+
3. (6 points) Give the correct IUPAC names for the following compounds
   1. HBr hydrobromic acid or hydrogen bromide
   2. Si3F8 trisilicon octafluoride
   3. Cr2O3 chromium(III) oxide
4. (4 points) Write the correct formula for each of the following compounds
   1. Calcium nitride Ca3N2
   2. Vanadium(V) bromide VBr5

Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 3c

Dr. Cary Willard February 27, 2013

1. (4 points) Explain the difference between a molecule and a formula unit. (Include information regarding the types of compounds that form each and why they do.)

Molecules are discrete particles, generally composed of non-metals, which are covalently bonded together. Formula units a unit of an ionic compound with balanced positive and negative charges. They are described as formula units because it is impossible to assign each ion to a specific unit or molecule? Formula units are composed of ions, generally a metal and a non-metal.

1. (3 points) Write the names of the following ions
   1. Ag+ silver ion
   2. Pb4+ lead(IV) ion
   3. C4- carbide ion
2. (3 points) Write the formulas for the following ions
   1. Calcium ion Ca2+
   2. Oxide ion O2–
   3. Ferrous ion Fe2+
3. (6 points) Give the correct IUPAC names for the following compounds
   1. HF hydrofluoric acid or hydrogen fluoride
   2. S2O7 disulfur heptoxide
   3. Co2S3 cobalt(III) sulfide
4. (4 points) Write the correct formula for each of the following compounds
   1. Barium phosphide Ba3P2
   2. Manganese(VI) bromide MnBr6

Chemistry 115 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Quiz 3d

Dr. Cary Willard February 27, 2013

1. (4 points) Explain the difference between a molecule and a formula unit. (Include information regarding the types of compounds that form each and why they do.)

Molecules are discrete particles, generally composed of non-metals, which are covalently bonded together. Formula units a unit of an ionic compound with balanced positive and negative charges. They are described as formula units because it is impossible to assign each ion to a specific unit or molecule? Formula units are composed of ions, generally a metal and a non-metal.

1. (3 points) Write the names of the following ions
   1. Ca2+ calcium ion
   2. Ti3+ titanium(III) ion
   3. Br- bromide ion
2. (3 points) Write the formulas for the following ions
   1. Silver ion Ag+
   2. Nitride ion N3–
   3. Ferric ion Fe3+
3. (6 points) Give the correct IUPAC names for the following compounds
   1. HCl hydrochloric acid or hydrogen chloride

This should have been Co3P2 with the name cobalt(II) phosphide

* 1. Cl2O6 dichlorine hexoxide
  2. Co2P3 cobalt(IV ½) phosphide

1. (4 points) Write the correct formula for each of the following compounds
   1. Aluminum oxide Al2O3
   2. Vanadium(V) bromide VBr5