Chemistry 115 Name Key

Dr. Cary Willard

Quiz 5a (20 points) March 11, 2010

Must show all work to receive credit. Use proper significant figures.

Avogadro’s number – 6.022 x 1023 particles/mol

1. (8 points) Give the appropriate name or formula as appropriate.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Formula |  | Formula | Name |
| Sodium sulfite | Na2SO3 |  | Mg(BrO4)2 | Magnesium perbromate |
| Aluminum periodate | Al(IO4)3 |  | Cu3N | Copper(I) nitride |
| lead(II) nitrate | Pb(NO3)2 |  | Zn3(PO4)2 | Zinc phosphate |
| Phosphorous pentachloride | PCl5 |  | K3BO3 | Potassium borate |

1. (6 points) Determine the mass of Ca3(PO4)2 that contains 9.76 x 1021 atoms of phosphorus.
2. (6 points) The percent composition of chromium arsenide is 48.06% Cr and 51.94% As. Calculate the empirical formula of chromium arsenide.

Chemistry 115 Name Key

Dr. Cary Willard

Quiz 5b (20 points) March 9, 2010

Must show all work to receive credit. Use proper significant figures.

Avogadro’s number – 6.022 x 1023 particles/mol

1. (8 points) Give the appropriate name or formula as appropriate.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Formula |  | Formula | Name |
| potassium sulfate | K2SO4 |  | Ca(ClO)2 | Calcium hypochlorite |
| Lead (IV) carbonate | Pb(CO3)2 |  | SnS2 | Tin(IV) sulfide |
| Barium perbromate | Ba(BrO4)2 |  | Zn3(PO3)2 | Zinc phosphate |
| Arsenic triiodide | AsI3 |  | Ti(NO3)3 | Titanium(III) nitrate |

1. (6 points) Determine the mass of Ca3(PO4)2 that contains 8.42 x 1021 atoms of phosphorus.
2. (6 points) The percent composition of manganese sulfide is 56.24% Mn and 43.76% S. Calculate the empirical formula of manganese sulfide.