Chemistry 115 Name Key

Dr. Cary Willard

Quiz 5a (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 |
| Sodium phosphate | Na3PO4 |  | KBrO | Potassium perbromite |
| Calcium nitrite | Ca(NO2)2 |  | VCl3 | Vanadium(III) chloride |
| Iron(III) perchlorate | Fe(ClO4)3 |  | Ag2SO3 | Silver sulfite |
| Carbon disulfide | CS2 |  | CaCO3 | Calcium carbonate |

1. (6 points) Determine the number of atoms of oxygen in 17.35 g of Ca3(PO4)2.
2. (6 points) The percent composition of bismuth oxide is 89.7% Bi and 10.3% O. Calculate the empirical formula of bismuth oxide.

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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 |
| lithium phosphite | Li3PO3 |  | Zn(ClO4)2 | Zinc perchlorate |
| Magnesium nitrate | Mg(NO3)2 |  | N2O4 | Dinitrogen tetroxide |
| Copper(II) hypoiodite | Cu(IO)2 |  | CaCO3 | Calcium carbonate |
| Zinc nitride | Zn3N2 |  | TiSO3 | Titanium(III) sulfite |

1. (6 points) Determine the number of atoms of oxygen in 31.25 g of Ca3(PO4)2.
2. (6 points) The percent composition of manganese phosphide is 72.7% Mn and 27.3% P. Calculate the empirical formula of manganese phosphide.