Chemistry 115 Name key

Dr. Cary Willard

Quiz 3a (20 points) February 22, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. K2S potassium sulfide
   2. SO3 sulfur trioxide
   3. CoBr3 cobalt(III) bromide
2. (3 points) Write the correct formula for each of the following compounds.
   1. Sodium nitride Na3N
   2. Nickel(II) chloride NiCl2
   3. Dibromine octoxide Br2O8
3. (2 points) What is the common name for an iron (III) ion?

Ferric ion

1. (4 points) What is the difference between an molecule and a formula unit?

A molecule is a group atoms bonded together with a definite beginning and ending. A formula unit represents the smallest ratio of ions which will give a neutral compound. There is no way to identify a specific grouping of particles comprising a molecule

1. (2 points) How many orbitals are there in an f sublevel?

7

1. (2 points) How many electrons can be in a p orbital?

2

1. (4 points) What is the complete electron configuration for an atom of magnesium?

1s2 2s2 2p6 3s2

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Quiz 3b (20 points) February 22, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. Na3P sodium phosphide
   2. CCl4 carbon tetrachloride
   3. CrS chromium(II) sulfide
2. (3 points) Write the correct formula for each of the following compounds.
   1. Potassium phosphide K3P
   2. Copper(II) iodide CuI2
   3. Dibromine hexasulfide Br2S6
3. (2 points) What is the common name for an iron (II) ion?

Ferrous ion

1. (4 points) What is the difference between an molecule and a formula unit?

A molecule is a group atoms bonded together with a definite beginning and ending. A formula unit represents the smallest ratio of ions which will give a neutral compound. There is no way to identify a specific grouping of particles comprising a molecule

1. (2 points) How many orbitals are there in an s sublevel?

1

1. (2 points) How many electrons can be in a d orbital?

2

1. (4 points) What is the complete electron configuration for an atom of aluminum?

1s2 2s2 2p6 3s2 3p1

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Quiz 3c (20 points) February 24, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. CaF2 calcium fluoride
   2. OCl2 oxygen dichloride
   3. Ti3N2 titanium(III) nitride
2. (3 points) Write the correct formula for each of the following compounds.
   1. Beryllium oxide BeO
   2. Mercury(II) bromide HgBr2
   3. Carbon tetrachloride CCl4
3. (2 points) What is the common name for an copper (I) ion?

Cuprous ion

1. (2 points) What is the difference between an orbit and an orbital?

An orbit is the circular path of an electron as predicted by Bohr. An orbital is the region in space where an electron has a high probability of existing.

1. (2 points) How many electrons are there in a p sublevel?

6

1. (2 points) How many electrons can be in a d orbital?

2

1. (4 points) What is the complete electron configuration for an atom of silicon?

1s2 2s2 2p6 3s2 3p2

Chemistry 115 Name key

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Quiz 3d (20 points) February 24, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. Li3P lithium phosphide
   2. PCl5  phosphorus pentachloride
   3. PbS2 lead(IV) sulfide
2. (3 points) Write the correct formula for each of the following compounds.
   1. Aluminum oxide Al2O3
   2. Manganese(III) fluoride MnF3
   3. Nitrogen triiodide NI3
3. (2 points) What is the common name for an copper (II) ion?

Cupric ion

1. (2 points) What is the difference between an orbit and an orbital?

An orbit is the circular path of an electron as predicted by Bohr. An orbital is the region in space where an electron has a high probability of existing.

1. (2 points) How many electrons are there in a d sublevel?

10

1. (2 points) How many electrons can be in a f orbital?

2

1. (4 points) What is the complete electron configuration for an atom of sulfur?

1s2 2s2 2p6 3s2 3p4