Chemistry 115 Name key

Dr. Cary Willard

Quiz 4a (20 points) March 1, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. BeCl2 beryllium chloride
   2. N2O4 dinitrogen tetroxide
   3. VF5 vanadium(V) fluoride
2. (3 points) Write the correct formula for each of the following compounds.
   1. Silver sulfide Ag2S
   2. iron(II) nitride Fe3N2
   3. krypton hexachloride KrCl6
3. (3 points) What is the shorthand electronic configuration of zirconium (Zr) as predicted by the periodic table?

[Kr] 5s2 4d2

1. (2 points) Give an example of an element that has 3 valence electrons.

B, Al, Ga, In, Tl

1. (2 points) Write the lewis electron dot structure for an atom of oxygen.

O

1. (3 points) Define the term ionization energy.

Amount of energy required to remove an electron from an atom.

1. (4 points) Circle the atom in each pair with the larger atomic radius
   1. Al or Cl
   2. C or Sn

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Quiz 4b (20 points) March 1, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. Li2As lithium arsenide
   2. C2Br6 dicarbon hexabromide
   3. CrN2 chromium(VI) nitride
2. (3 points) Write the correct formula for each of the following compounds.
   1. Zinc iodide ZnI2
   2. Titanium(II) phosphide Ti3P2
   3. Xenon pentafluoride XeF5
3. (3 points) What is the shorthand electronic configuration of molybdenum (Mo) as predicted by the periodic table?

[Kr] 5s2 4d4

1. (2 points) Give an example of an element that has 5 valence electrons.

N, P, As, Sb, Bi

1. (2 points) Write the lewis electron dot structure for an atom of boron.

B

1. (3 points) Define the term ionization energy.

Amount of energy required to remove an electron from an atom.

1. (4 points) Circle the atom in each pair with the larger atomic radius
   1. F or I
   2. K or Se

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Quiz 4c (20 points) March 3 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. CdCl2 cadmium chloride
   2. XeO6 xenon hexoxide
   3. NiS nickel(II) sulfide
2. (3 points) Write the correct formula for each of the following compounds.
   1. Barium iodide BaI2
   2. Tin(IV) sulfide SnS2
   3. Tribromine octoxide Br3O8
3. (3 points) What is the shorthand electronic configuration of antimony (Zr) as predicted by the periodic table?

[Kr] 5s2 4d10 5p3

1. (2 points) Give an example of an element that has 4 valence electrons.

C, Si, Ge, Sn, Pb

1. (2 points) Write the lewis electron dot structure for an atom of chlorine.

Cl

1. (3 points) Define the term ionization energy.

Amount of energy required to remove an electron from an atom.

1. (4 points) Circle the atom in each pair with the larger atomic radius
   1. P or Bi
   2. Rb or Te

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Quiz 4d (20 points) March 3, 2011

1. (3 points) Write the correct IUPAC name for each of the following compounds.
   1. ZnBr2 zinc bromide
   2. KrF7 krypton heptachloride
   3. FeP iron(III) phosphide
2. (3 points) Write the correct formula for each of the following compounds.
   1. Cesium iodide CsI2
   2. Bismuth(V) fluoride BiF5
   3. Diphosphorus trisulfide P2S3
3. (3 points) What is the shorthand electronic configuration of Indium (In) as predicted by the periodic table?

[Kr] 5s2 4d10 5p1

1. (2 points) Give an example of an element that has 6 valence electrons.

O, S, Se, Te, Po

1. (2 points) Write the lewis electron dot structure for an atom of silicon.

Si

1. (3 points) Define the term ionization energy.

Amount of energy required to remove an electron from an atom.

1. (4 points) Circle the atom in each pair with the larger atomic radius
   1. O or Te
   2. Sr or Xe