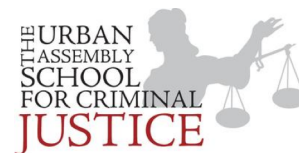


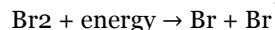
Name: _____ Date: _____

Chemistry ~ Ms. Hart **Class:** Anions or Cations

Unit 5 – Chemical Bonding – Sample Regents Questions



1. Given the balanced equation representing a reaction:



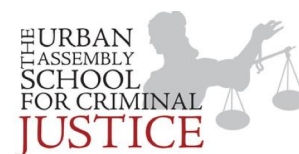
Which statement describes the energy change and bonds in this reaction?

- Energy is released as bonds are broken.
 - Energy is released as bonds are formed.
 - Energy is absorbed as bonds are broken.
 - Energy is absorbed as bonds are formed.
2. An ionic compound is formed when there is a reaction between the elements
- strontium and chlorine
 - hydrogen and chlorine
 - nitrogen and oxygen
 - sulfur and oxygen
3. Which formulas represent one ionic compound and one molecular compound?
- N_2 and SO_2
 - Cl_2 and H_2S
 - BaCl_2 and N_2O_4
 - NaOH and BaSO_4
4. When an atom of chlorine forms an ionic bond with an atom of sodium, the atom of chlorine
- loses an electron
 - loses a proton
 - becomes an ion with a smaller radius than the atom of chlorine
 - becomes an ion with a larger radius than the atom of chlorine
5. When a metal atom combines with a nonmetal atom, the nonmetal atom will
- lose electrons and decrease in size
 - lose electrons and increase in size
 - gain electrons and decrease in size
 - gain electrons and increase in size

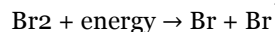
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6. The correct name of the compound with the formula PbO_2 is

- a. lead (I) oxide
- b. lead (II) oxide
- c. lead (III) oxide
- d. lead (IV) oxide

7. The name of the compound KClO_2 is potassium

- a. hypochlorite
- b. chlorite
- c. chlorate
- d. perchlorate

8. In a propanal molecule, an oxygen atom is single-bonded with a carbon atom. What is the total number of pairs of electrons shared between these atoms?

- (1) 1
- (2) 2
- (3) 3
- (4) 4

9. A solid substance is an excellent conductor of electricity. The chemical bonds in this substance are most likely

- (1) ionic, because the valence electrons are shared between atoms
- (2) ionic, because the valence electrons are mobile
- (3) metallic, because the valence electrons are stationary
- (4) metallic, because the valence electrons are mobile

10. Which formula represents an ionic compound?

- (1) H_2
- (2) CH_4
- (3) CH_3OH
- (4) NH_4Cl

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8. In a propanal molecule, an oxygen atom is single-bonded with a carbon atom. What is the total number of pairs of electrons shared between these atoms?

- (5) 1
- (6) 2
- (7) 3
- (8) 4

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