Name: _____ Class: _____ Date: _____ ID: B

Midterm 1 - Fall 2011 - Chemistry 1501 Chemistry for Engineering

True/False
Indicate whether the statement is true or false.

____ 1. Elements in a periodic family tend to react in similar fashion.

____ 2. Cations are particles with fewer electrons than protons.

____ 3. This reaction: $C_7H_{16} + 11\ O_2 \rightarrow 7\ CO_2 + 8\ H_2O$ represents the complete combustion of heptane.

____ 4. A limiting reactant is completely consumed in the course of a reaction and may be used to determine how much product(s) may be produced.

____ 5. Sodium nitrate is a strong electrolyte.

____ 6. A horizontal row of elements on the periodic table is referred to as a family.

____ 7. The nucleus is comprised of the atom's neutrons and protons.

____ 8. There are 12 oxygen atoms in four molecules of dinitrogen tetraoxide.

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 9. The correct molecular formula of tin(IV) oxide is:
a. TiO_2
b. SnO_2
c. SnO_4
d. TiO_4

____ 10. Given that: $NaClO(aq) + HBr(aq) \rightarrow NaBr(aq) + HClO(aq)$, how many mL of 3.0 M HBr is required to neutralize 50.0 mL of 2.5 M NaClO?
a. 42 mL
b. 75 mL
c. 63 mL
d. 60 mL

____ 11. The correct molecular formula for iron(II) bromide is:
a. $FeBr_3$
b. $FeBr_2$
c. I_2Br_2
d. IBr_3

____ 12. Which isotope contains 16 protons?
a. ^{16}O
b. ^{19}F
c. ^{35}S
d. ^{32}P