

Name:

Chapter 7 Study Guide

For the test, you should be able to:

- **Explain** the significance of a chemical formula.
- **Determine** the formula of an ionic compound formed between two given ions.
- **Name** an ionic compound given its formula.
- Using prefixes, **name** a binary molecular compound from its formula.
- **Write** the formula of a binary molecular compound given its name.
- **List** the rules for assigning oxidation numbers.
- **Give** the oxidation number for each element in the formula of a chemical compound.
- **Name** binary molecular compounds using oxidation numbers and the Stock system.
- **Calculate** the formula mass or molar mass of any given compound.
- **Use** molar mass to convert between mass in grams and amount in moles of a chemical compound.
- **Calculate** the number of molecules, formula units, or ions in a given molar amount of a chemical compound.
- **Calculate** the percentage composition of a given chemical compound.
- **Define** *empirical formula*, and explain how the term applies to ionic and molecular compounds.
- **Determine** an empirical formula from either a percentage or a mass composition.
- **Explain** the relationship between the empirical formula and the molecular formula of a given compound.
- **Determine** a molecular formula from an empirical formula.