Chapter 3 & 4 Preview Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Directions: Write “correct” in the blank following the statement if the statement is true. If the statement is false, cross out the italicized word(s) and write the word(s) in the blank to make the statement true. Also, preceding the statement, write in the page number(s) where this information is found in the text.

**Page**

\_\_\_\_\_1. The law of conservation of mass states that the mass of the reactants in a reaction *will not equal* the mass of the products. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_2. The *law of definite proportions* states that two samples of a given compound are made of the same elements in exactly the same proportions by mass regardless of size. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_3. One of the five principles in *Dalton’s* Atomic Theory suggests that atoms cannot be created nor destroyed. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_4. An electron is an example of a *subatomic* particle. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_5. Rutherford showed that the *electron cloud* is the dense, inner portion of the atom. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_6. Atoms of the same element will always have the same atomic number because they will always have the same number of *neutrons*. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_7. Atoms of the same element that have a different number of neutrons are called *ions*. \_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_8. Adding the protons and neutrons together gives the mass number of the atom. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_9. One *mass* of a material will contain an Avagadro’s number of items. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_10. The *electromagnetic* spectrum is the continuous, broad range of electromagnetic radiation. \_\_\_\_\_\_\_

\_\_\_\_\_11. The minimum amount of energy that can be lost or gained by an atom is called a *spectrum* of energy. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_12. An electron in its lowest state of energy is at *an excited* state. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_13. *Orbitals* are 3-D regions around the nucleus that indicate the probable location of electrons. \_\_\_\_\_\_

\_\_\_\_\_14. The *arrangement* of electrons in an atom is known as the atom’s electron configuration. \_\_\_\_\_\_\_\_\_

\_\_\_\_\_15. The Aufbau Principle states that electrons fill *excited* energy levels first. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_ 16. The *Mock* Exclusion Principle states that two electrons in the same orbital will have opposite spin. \_

\_\_\_\_\_17. Hunds Rule states that one electron must fill each orbital in a sublevel before pairing may occur. \_\_\_

Directions: Answer #11 on page 92 of your text:

a. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_