**Classifying Matter** (p. 45 – 50)

**I. What Is Matter?**

 **1. Define the term matter.**

 Matter –

 **2. What is the study of chemistry?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. What do chemists study?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **4. List the three categories for classifying matter.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**II. Elements**

 **1. Define the term element.**

 Element –

 **2. An \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the smallest unit of an element that keeps an element’s chemical**

 **properties.**

 **3. Each element is made up of one kind of atom.**

 Circle One : True False

 **4. How are elements represented on the periodic table of elements?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **5. On the periodic table (p. 148 - 149), identify elements that are gases at room temperature.**

 a. carbon

 b. oxygen

 c. mercury

 d. nitrogen

 **6. Define the term molecule.**

 Molecule –

 **7. List four examples of elemental molecules.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**III. Compounds**

 **1. Define the term compound.**

 Compound –

 **2. List four examples of compounds.**

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. Elements combine in the same proportions to make a specific compound.**

 Circle One : True False

 **4. Explain how compounds have different properties than individual elements of compounds.**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **5. What does a chemical formula indicate?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **6. How many of each element is in the compound glucose (C6H12O6)?**

 Carbon (C) = \_\_\_\_\_\_\_\_\_\_ Hydrogen (H) = \_\_\_\_\_\_\_\_\_\_ Oxygen (O) = \_\_\_\_\_\_\_\_\_\_

**IV. Pure Substances & Mixtures**

 **1. Define the term pure substance.**

 Pure Substance –

 **2. Why is a mixture not considered a pure substance?**

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **3. List an example of a pure substance and mixture.**

 1. Pure Substance = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. Mixture = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **4. Match the type of mixture with the correct definition.**

 1. \_\_\_\_\_ - Heterogeneous A. Contains two or more substances blended evenly together

 2. \_\_\_\_\_ - Homogeneous B. Different materials can be distinguished easily

**5. Give two examples of each type of mixture.**

 Heterogeneous Mixture Homogeneous Mixture

 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 **6. Gases and liquids can combine into a mixture.**

 Circle One : True False