**BIOCHEMISTRY REVIEW SHEET**

**Atomic Basics**

1. What is the basic unit of matter?
2. Neutrons have a ‑\_\_\_\_\_\_\_\_\_\_charge?
3. Electrons have a ‑\_\_\_\_\_\_\_\_\_\_\_charge?
4. Protons have a \_\_\_\_\_\_\_\_\_\_\_\_charge?
5. Define an element?
6. Define atomic mass?
7. Define atomic number?
8. Give an example of a chemical change?
9. Give an example of a physical change
10. What is the difference between a homogeneous/heterogeneous mixture?
11. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reaction gives off heat, while a(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_ reaction absorbs heat.
12. Which side of the equation is the reactant and product on?
13. What’s the difference between a compound and a molecule?
14. Explain how H2O is both a molecule and a compound.

**Enzymes**

1. What is an enzyme?
2. What is activation energy?
3. What does an enzyme do to the activation energy of a reaction?
4. Define active site.
5. Define substrate.
6. Describe how the lock and key model relate to enzymes?
7. What type of macromolecule are enzymes?

**Water/pH**

1. What is the difference between cohesion/ adhesion in relation to water?
2. In solutions, the \_\_\_\_\_\_\_\_\_\_\_ is doing the dissolving while the \_\_\_\_\_\_\_\_\_ is being dissolved.
3. Name the type of bond in water?
4. A pH of 7 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. A pH below 7 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. A pH above 7 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
7. Which property of water allows it to form a “dome” on top of a penny?
8. What are three characteristics of water?

**Macromolecules**

1. What is a monomer?
2. Name the four macromolecules?
3. Which element is common to all 4 macromolecules?
4. What is the building block of proteins?
5. Give examples of lipids?
6. Give examples of carbohydrates?
7. Name the 2 types of nucleic acids?
8. Nucleic acids are made of?
9. Which macromolecule is main source of energy?
10. Which macromolecule is important for energy storage and insulation?
11. Which macromolecule is important for storing and transmitting genetic information?