BIOL 1107
CHAPTER 6 STUDY GUIDE
February 16, 2011

The following questions will help you independently study the material in Chapter 6. You should answer these questions on your own paper and in your own handwriting. You will turn your answers in for a grade. Additionally, there will be a quiz over Chapter 6 on _____.

1. Who discovered cells?
2. Who was the first person to see living microscopic organisms?
3. What is a light microscope? How does it work?
4. What does the term *resolution* mean in relation to microscopes?
5. What is an electron microscope? What are the two types? How do they differ? What are some advantages/disadvantages to using an electron microscope compared to a light microscope?
6. What is cell fractionation?
7. Compare and contrast eukaryotic cells and prokaryotic cells as discussed in Chapter 6.
8. Why are cells limited in size?
9. Describe the structure/function of the following prokaryotic cell components:
    a. Cell wall
    b. Pili
    c. Capsule
    d. Flagellum
10. Describe the structure/function of the following plant cell components (only found in plant cells):
    a. Cell wall
    b. Chloroplast
    c. Central Vacuole
    d. Plasmodesmata
11. List 3 components that are found in animal cells, but not in plant cells.
12. Describe the structure and function of the following cellular components:
    a. Nucleus
    b. Ribosomes
    c. Nucleolus
    d. Vesicles
    e. Smooth endoplasmic reticulum
    f. Rough endoplasmic reticulum
    g. Golgi Complex
    h. Lysosome
    i. Peroxisome
    j. Vacuoles
    k. Cytoskeleton
13. What is chromatin?
14. What is the difference between cilia and flagella? What is their major structural component?
15. What are cell walls comprised of?
16. What is the extracellular matrix?
17. Describe the structure/function of each of the following cell junctions:
    a. Gap junctions
    b. Tight junctions
    c. Desmosomes