Cells and Systems – Section 1 and 2 Study Guide

1. What are the characteristics that all living things have in common?
2. What is the basic unit of all living things called?
3. Put the following terms in order from simplest to most complex: tissues, organ systems, organs, cells
4. What is the difference between unicellular and multicellular organisms?
5. How are unicellular organisms usually able to be so small, but still survive?
6. Which of the following is not unicellular? An amoeba or a giraffe?
7. How do paramecium move through the water?
8. Be able to label diagrams of both an animal cell and a plant cell.
9. What are the main differences between animal and plant cells?
10. What does the nucleus in a cell act as?
11. Which part of the cell is considered the “powerhouse” of the cell?
12. Which part of the cell is like a storage room?
13. What is the “controllable gateway” in a cell called?
14. Be able to label the parts of the microscope and understand how microscopes can help us see the details of internal parts of an organism.
15. Define *osmosis*.
16. Define *diffusion*.
17. In both osmosis and diffusion particles always move from \_\_\_\_\_\_\_\_\_\_\_\_ concentration to \_\_\_\_\_\_\_\_\_\_\_\_\_ concentration.
18. What are the three tissue types in plants called?
19. How are animal and plant organs different?
20. Define the word *metabolism*.
21. Give an example of a stimulus and a response to that stimulus.
22. Give an example of a *structural adaptation* that a bird has. Explain how the structure of this adaptation is dependent on the function that it does. Why could this adaptation be structurally different in a different type of bird?