**Name:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Date:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **Period:** \_\_\_\_\_\_\_

**Unit 2 (Cell Biology) Study Guide**

**\*Answer on a separate sheet of paper**

\*Answers do not need to be in complete sentences but you should indicate what you are referring to. For example, in question #1, you would write the word prokaryote and then describe it in bullet points. Then you would do the same for Eukaryotes.

1. Cells are classified as prokaryotes and eukaryotes. Describe these classifications.
2. What is a cell/plasma membrane? What are its main functions?
3. What is the difference between the cell/plasma membrane and the cell wall?
4. Where in the cell can ribosomes be found? What is the main biological function of ribosomes?
5. What is a plant cell wall made of? What do the letters “ose” indicate? Which macromolecule is this an example of?
6. What is the difference between osmosis and diffusion?
7. How are solutions classified according to their comparative tonicity? Describe all three.
8. What is the relationship between concentration gradient and active and passive transport?
9. What is the energy source used to power active transport through a cell membrane?
10. Compare and contrast chromatin, chromosomes and chromatids. Include a drawing.
11. List the 3 phases of the cell cycle and describe what happens in each phase.
12. Briefly describe the phases of Mitosis.
13. In Mitosis, how are the parent cells and daughter cells alike?
14. Explain 2 ways in which mitosis and meiosis are different.
15. Explain how the cancer cell cycle is different from the normal cell cycle.

**\*Be sure to review plant and animal cell diagrams as well as the chart with the organelles and their functions.**