Biology Test 4 Study Guide

1. What is the cell theory?
2. What are the two major cell types? Know the differences between them.
3. What is the cell membrane made out of? Why does it have this structure?
4. Know the difference between an isotonic, hypertonic and hypotonic solution.
5. Know the difference between diffusion, osmosis, facilitated diffusion, and active transport.
6. What is the “concentration gradient”? What does it mean to go with or against the concentration gradient?
7. What is dynamic equilibrium?
8. What are the two different proteins used in facilitated diffusion? How are they different?
9. Know what endocytosis and exocytosis are. When are they used? Does it require energy?
10. What are phagocytosis and pinocytosis?
11. Know the function of the following cellular organelles: vacuole, lysosome, centrioles, cytoplasm, ribosome, cell (plasma) membrane, mitochondria, chloroplast, nucleus, nuclear membrane (envelope), smooth and rough endoplasmic reticulum, cilia, flagella, cell wall, and cytoskeleton.
12. What are the 2 major parts of the cytoskeleton and what are their functions?
13. What are the differences between plant and animal cells?

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