Chapter 7 (Cells) Study Guide

Vocabulary

Active Transport, Passive Transport, Concentration Gradient, Diffusion, Endocytosis, Eukaryote, Prokaryote, Exocytosis, Facilitated Diffusion, Fluid Mosaic Model, Hypertonic, Hypotonic, Isotonic, Osmosis (Osmotic Pressure), Organelle, Phospholipid, Protein Channel (Gate), Protein Pump, Selective or Semi-Permeable

Section 7.1 Objectives (Cells and Cell Theory)

1. Describe the Cell Theory
2. What did Schleiden, Schwann, Virchow and Hooke contribute to the cell theory?
3. What is the most important discovery/invention to our knowledge about cells?
4. Define what a cell is. (All cells …)
5. Describe the differences between Eukaryotic and Prokaryotic cells.

Section 7.2 Objectives (Cell Structure and Function)

1. Describe the function of the following organelles: Nucleus, Nucleolus, Mitochondria, Ribosome, Rough and Smooth ER, Golgi Body, Lysosome, Cell Wall, Cytoskeleton, Chloroplast, Vacuole, Vesicle
2. Describe the differences and similarities between plant and animal cells.
3. Label structures in a Eukaryotic cell based on shape and location.

Section 7.3 Objectives (Cell Membrane and Transport)

1. Draw, identify and describe the function of the components of the cell membrane.
2. Explain why cell membranes are given the name the Fluid Mosaic Model
3. Describe why cells are considered selectively permeable.
4. Describe the differences between passive transport and active transport.
5. List and describe the different types of passive and active transports.
6. Explain why/when passive transport would be used over active transport.
7. Explain what a concentration gradient is and how it determines the movement of molecules.
8. Describe how hypertonic, hypotonic and isotonic solutions would control the direction of osmosis.

Section 7.4 Objectives (Cell Specialization and Organization)

1. Describe the levels of organization in a multi-cellular organism.
2. Describe the relationship between cell specialization and cell function.