**Study Guide: Biology Test – Chapter 3 Cells**

1. Identify the function, structure, and type of cell the following organelles

Cell membrane

mitochondria (mitochondrion)

Cell wall

vacuole

Cytoskeleton

lysosome

Nucleus

ribosomes

1. Endoplasmic reticulum

Centriole/centrosome

Golgi apparatus chloroplast

vesicle

1. Explain the principles of the cell theory.
2. Describe the similarities and differences between prokaryotic and eukaryotic cells.
3. Briefly explain the history of the development of cell theory. What major invention contributed to our knowledge of cells?
4. Explain the fluid mosaic model.
5. Describe and recognize the structure of the phospholipid bilayer. Explain the function of the different molecules that make up the cell membrane. What are transport proteins?
6. Describe the purpose of receptor cells and ligands.
7. Explain how selective permeability contributes to a cell’s ability to maintain homeostasis.
8. Explain the process of endocytosis, exocytosis, and phagocytosis
9. What is a concentration gradient and how does it related to the movement of substances in a cell.
10. Explain the difference between passive and active transport. Describe the different processes of each (osmosis, diffusion, facilitated diffusion…)
11. Explain what happens to cells in the following solutions: isotonic, hypotonic, hypertonic.
12. Answer the chapter assessment questions on page 95 and 97 of your text.

**Study Guide: Biology Test – Chapter 3 Cells**

1. Identify the function, structure, and type of cell the following organelles

Cell membrane

mitochondria (mitochondrion)

Cell wall

vacuole

Cytoskeleton

lysosome

Nucleus

ribosomes

1. Endoplasmic reticulum

Centriole/centrosome

Golgi apparatus chloroplast

vesicle

1. Explain the principles of the cell theory.
2. Describe the similarities and differences between prokaryotic and eukaryotic cells.
3. Briefly explain the history of the development of cell theory. What major invention contributed to our knowledge of cells?
4. Explain the fluid mosaic model.
5. Describe and recognize the structure of the phospholipid bilayer. Explain the function of the different molecules that make up the cell membrane. What are transport proteins?
6. Describe the purpose of receptor cells and ligands.
7. Explain how selective permeability contributes to a cell’s ability to maintain homeostasis.
8. Explain the process of endocytosis, exocytosis, and phagocytosis
9. What is a concentration gradient and how does it related to the movement of substances in a cell.
10. Explain the difference between passive and active transport. Describe the different processes of each (osmosis, diffusion, facilitated diffusion…)
11. Explain what happens to cells in the following solutions: isotonic, hypotonic, hypertonic.
12. Answer the chapter assessment questions on page 95 and 97 of your text.