Name:_____ Date:_____

Chapter 7 Review

1. Diagram an individual phosopholipid and a bilayer of phospholipids. Label the hydrophillic head, and hydrophobic tails on both.

2. Explain the Fluid Mosaic model of the cell membrane and describe the functions of the proteins that are embedded in the membrane.

3. Explain why particular substances will or will not be able to pass through the phospholipid bilayer of the cell membrane.

4. Diagram the cell membrane. Label the following parts: lipid bilayer, integral proteins, peripheral proteins, cholesterol, cytoskeleton, extracellular matrix, glycoproteins, glycolipids. Explain the function of each part of the cell membrane in contributing to the functioning of the cell.

5. How do membrane-protein structure allow for portions of the protein to be embedded in the membrane AND allow portions to extend in to and out of the cell.

6. If cells cannot visually inspect other cells, how do the cells of our immune system know if a particular cell they encounter is part of us, or part of another organism?

7. Diagram one complete cycle of the sodium-potassium pump. Is this active or passive transport? Why?

8. Create a table showing the similarities and differences between simple diffusion, facilitated diffusion, and active transport. Explain where cells get the energy to power active transport.

9. Is it possible for a solution to be both hypertonic and hypotonic? Why or Why not? What is the relationship between osmosis and tonicity?

10. Explain the adaptive strategies of animal, plant, and protist cells for dealing with the tonicity of their environments.

11. How do large molecules get taken in to or removed from the cell?