Study Guide Chapter 7 – Membranes

1. Describe an experiment that demonstrates that proteins can move laterally through the membrane.
2. Describe three factors that influence fluidity of membranes.
3. Would you expect trees adapted to cold environments to have more or less saturated fatty acids? Explain your reasoning.
4. What is the difference between an integral membrane protein and a peripheral membrane protein?
5. What is meant when biological membranes are described as having “sidedness”? Explain the process that causes the membranes to have “sidedness”.
6. Contrast the passive diffusion of carbon dioxide and of water across biological membranes?
7. What allows some molecules to move across the membrane by facilitated diffusion while molecules with similar structure cannot move by facilitated diffusion?
8. Limp celery will become crisp and firm when submerged in water. What explains this process?
9. What determines the direction of movement of water during osmosis?
10. Why is the Sodium-Potassium pump described as “electrogenic”?
11. Cotransporters can move molecules against their concentration gradient? What is the source of energy for this movement?
12. Contrast energy requirements of passive diffusion, facilitated diffusion and active transport.
13. Contrast the direction of movement of molecules by passive diffusion, facilitated diffusion and active transport.
14. Contrast the biological function of pinocytosis and receptor mediated endocytosis.
15. Why is exocytosis necessary if cells are growing?

Complete the following concept check questions from Chapter 7
7.1(1,2) 7.2(1,2) 7.3 (1), 7.4(1,2) 7.5 (1,2)

Complete the following questions from the self-quiz at the end of the chapter 1-9

Complete the following questions from the chapter 7 activity quiz 1-4, 6-21

Complete the following questions from the website chapter 7 quiz 1-37