Name _____ **Period** _____

AP Biology **Date** _____

RAVEN CHAPTER 6 GUIDED NOTES: MEMBRANES

1. Describe the structure of a phospholipid molecule. Be sure to describe their behavior in relation ship to water.

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_____

_____

2. What happens when a collection of phospholipids molecules are placed in water?

_____

_____

3. Explain the significance of this behavior in relationship to the evolution of life.

_____

_____

4. What is meant by the phrase “the plasma membrane is fluid”?

_____

_____

5. Explain the fluid mosaic model.

_____

_____

_____

6. How is the fluidity of the cell membrane altered?

_____

_____

7. Describe the components of the cell membrane. Explain the function of each and give an example

   a. _____

   _____

   b. _____

   _____

   c. _____

   _____

   d. _____

   _____

8. List and briefly describe the different classes of membrane proteins and the roles they play.

   a. _____

   _____

   b. _____

   _____

   c. _____

   _____

   d. _____

   _____

   e. _____

   _____

   f. _____

   _____

9. Describe how the structure of membrane proteins allows some proteins to be permanently anchored within the cell membrane as a transmembrane protein whereas other proteins can move freely about the surface of the membrane.

_____

_____

_____

_____

10. The cell membrane is selectively permeable. Explain what that means. Which molecules easily cross the membrane? How are molecules transported that do not easily cross the membrane?

_____

_____

_____

11. Define the following

a. Diffusion _____

_____

b. Facilitated Diffusion_____

_____

c. Osmosis _____

_____

d. Hypotonic _____

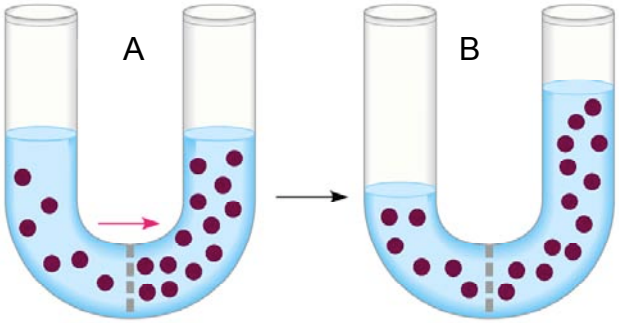
_____

e. Hypertonic_____

_____

f. Isotonic _____

12. What is happening in the diagram below?



13. Explain how facilitated diffusion works and give an example.

_____

_____

_____

14. What is the function of aquaporins? Why are they necessary?

_____

_____

_____

15. What do animal & plant cells do when placed in solutions that are:

a. Hypotonic _____

b. Hypertonic _____

c. Isotonic _____

16. How does the *Paramecium* maintain osmoregulation?

_____

_____

17. What is the difference between exocytosis and endocytosis?

_____

_____

_____

18. Distinguish between pinocytosis and phagocytosis.

_____

_____

_____

19. Describe an example of receptor-mediated endocytosis.

_____

_____

_____

20. How do active and passive transport differ?

_____

_____

_____

21. The sodium-potassium pump uses _____ to pump _____ out of the cell and _____ into the cell.

22. Define coupled transport and give an example.

_____

_____

23. Define counter transport and give an example

_____