

Name \_\_\_\_\_

**AP Biology**

**TEXT: *Biology, Campbell and Reece***

**7<sup>th</sup> Edition**

**Chapter 7**

**Cell Biology – Membrane Structure and Function  
Thematic Review Guide**

1. What evidence supports the fluid mosaic model of the cell membrane?

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2. What is meant by membrane fluidity?

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3. How is fluidity reduced in animal cells?

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4. Describe the orientation of the membrane proteins

a. Peripheral \_\_\_\_\_

b. Integral \_\_\_\_\_

5. How are the two sides of the membrane different?

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6. List and briefly define the roles of the membrane proteins.

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

d. \_\_\_\_\_

e. \_\_\_\_\_

f. \_\_\_\_\_

7. What membrane structures are important for cell-cell recognition?

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8. Which molecules easily cross the membrane?

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9. How are molecules transported that do not easily cross the membrane?

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10. Define the following:

a. Diffusion \_\_\_\_\_

b. Osmosis \_\_\_\_\_

c. Hypotonic \_\_\_\_\_

d. Hypertonic \_\_\_\_\_

e. Isotonic \_\_\_\_\_

11. What do cells do when placed in solutions that are:

a. Hypotonic \_\_\_\_\_

b. Hypertonic \_\_\_\_\_

c. Isotonic \_\_\_\_\_

12. How does the Paramecium maintain osmoregulation?

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13. What is meant by facilitated diffusion?

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14. How do active and passive transport differ?

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15. The sodium-potassium pump uses \_\_\_\_\_ to pump \_\_\_\_\_  
out of the cell and \_\_\_\_\_ into the cell.

16. How does the membrane generate voltage?

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17. What can the cell do with the voltage generated in the membrane?

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18. Define cotransport and give an example.

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19. What is the difference between exocytosis and endocytosis?

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20. Describe an example of receptor-mediated endocytosis.

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