

Directed Reading

Section: Cell Membrane

Read each question, and write your answer in the space provided.

1. What is homeostasis, and what is the main way that the cell membrane helps maintain homeostasis?

2. List three other functions of the cell membrane.

Complete each statement by writing the correct term or phrase in the space provided.

3. The _____ is made of a double layer of phospholipids. The double layer of phospholipids is called a(n) _____.

4. The lipid bilayer forms because there is _____ both inside and _____ of the cell.

5. The phosphate _____ of a phospholipid is polar. It is _____ water.

6. The long fatty acid _____ of a phospholipid are nonpolar. They are _____ water.

7. The lipid bilayer forms a barrier, preventing most molecules from passing through it. Only molecules that are _____ in size and _____ can pass through the lipid bilayer.

Directed Reading *continued*

8. Ions, which are _____ particles, and _____ molecules are repelled by the nonpolar interior of the lipid bilayer.
9. The cell membrane includes various kinds of _____. Some face the inside of the cell. Some face the _____ of the cell. Others span the entire width of the _____.

Read each question, and write your answer in the space provided.

10. What are proteins made of? _____

11. Why do proteins stay within the lipid bilayer of the cell membrane?

12. List the four types of proteins found in a cell membrane.

In the space provided, write the letter of the description that best matches each term.

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| _____ 13. cell-surface marker | a. helps with chemical reactions inside the cell |
| _____ 14. receptor protein | b. recognizes and binds to substances outside the cell, enabling the cell to sense its environment |
| _____ 15. enzyme | c. helps substances move across the cell membrane |
| _____ 16. transport protein | d. identifies the cell type |