

SECTION 5-2 REVIEW**ACTIVE TRANSPORT****VOCABULARY REVIEW** Define the following terms.

1. active transport _____

2. endocytosis _____

3. vesicle _____

4. phagocytosis _____

MULTIPLE CHOICE Write the correct letter in the blank.

- _____ 1. Facilitated-diffusion carrier proteins and cell-membrane pumps both
- | | |
|---|---|
| a. require an input of energy. | c. transport substances up their concentration gradients. |
| b. are specific for the kinds of substances they transport. | d. carry out active transport. |
- _____ 2. The sodium-potassium pump transports
- | | |
|--|---|
| a. Na^+ out of the cell and K^+ into the cell. | c. K^+ out of the cell and Na^+ into the cell. |
| b. Na^+ and K^+ in both directions across the cell membrane. | d. Na^+ during some cycles and K^+ during other cycles. |
- _____ 3. The energy needed to power the sodium-potassium pump is provided by the
- | | |
|----------------------------------|----------------------|
| a. binding of ATP to the pump. | c. splitting of ATP. |
| b. transport of ATP by the pump. | d. formation of ATP. |
- _____ 4. Pinocytosis involves the transport of
- | | |
|-----------------------------------|-----------------------------------|
| a. large particles out of a cell. | c. whole cells into another cell. |
| b. fluids into a cell. | d. lysosomes out of a cell. |
- _____ 5. Exocytosis is a
- | |
|--|
| a. type of passive transport. |
| b. mechanism by which cells ingest other cells. |
| c. transport process in which vesicles are formed from pouches in the cell membrane. |
| d. way for cells to release large molecules, such as proteins. |

SHORT ANSWER Answer the questions in the space provided.

1. Why is the sodium-potassium transport mechanism called a “pump”? _____

2. Explain how a phagocyte destroys bacteria. _____

3. Describe how a cell produces and releases proteins. _____

4. **Critical Thinking** Why is it important that ions being transported across a cell membrane be shielded from the interior of the lipid bilayer? _____

STRUCTURES AND FUNCTIONS Use the figure to answer the following questions.

1. The diagrams below represent the six steps in one cycle of the sodium-potassium pump. The order of the steps has been scrambled. Beginning with diagram *d* (numbered 1), sequence the remaining diagrams by writing the appropriate numeral in each blank.
2. On which side of the membrane are Na^+ ions released from the pump? _____
3. On which side of the membrane are K^+ ions released from the pump? _____

