Active Transport Worksheet

1. The difference between active and passive transport is that active transport requires ________________, while passive transport does not.

2. Define Active Transport:

_____________________________________________________________________________________________________________________________

_____________________________________________________________________________________________________________________________

3. Do molecules crossing a membrane using active transport go WITH or AGAINST the concentration gradient? ________________

4. Molecules crossing a membrane using active transport go from ______ concentration to ______ concentration.

5. What type of energy is needed for active transport? ________________

6. The prefix \textit{exo}- means "out of" and the prefix \textit{endo}- means "taking in". How do these meanings relate to the meaning of exocytosis and endocytosis?

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_____________________________________________________________________________________________________________________________

7. Define Endocytosis: ________________________________________________________

_____________________________________________________________________________________________________________________________

Draw a picture of endocytosis:

8. Define Exocytosis: ________________________________________________________

_____________________________________________________________________________________________________________________________

Draw a picture of exocytosis:
9. Which of the following is a form of active transport? (circle one)
   facilitated diffusion  diffusion  endocytosis  osmosis

10. What is the difference between active transport and passive transport (diffusion & osmosis)?
    _______________________________________________________________________________________________________________________
    _______________________________________________________________________________________________________________________
    _______________________________________________________________________________________________________________________

11. What process is shown in Figure A? _____________________________

12. What process is shown in Figure B? _____________________________

13. An amoeba engulfs a particle of food.
   Does this require energy? _____________________________
   Is this active or passive transport? _____________________________
   Is this endocytosis or exocytosis? _____________________________
   Is this Phagocytosis or Pinocytosis? _____________________________

   Does this require energy? _____________________________
   Is this active or passive transport? _____________________________
   Is this endocytosis or exocytosis? _____________________________
15. Do you think that endocytosis and exocytosis can occur within the same cell? *Explain your reasoning.*

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16. If the transport proteins that carry amino acids into a cell stopped working, how might the process affect the cell?

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17. Fill in the T-Chart comparing and contrasting active and passive transport:

<table>
<thead>
<tr>
<th>Active Transport</th>
<th>Passive Transport</th>
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<tbody>
<tr>
<td></td>
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