Biological Uptake

Match the definition on the left with the term on the right.

1. _____release of wastes or cell products from inside to outside a cell
2. _____diffusion of water molecules through a selectively permeable membrane
3. _____movement of particles from an area of higher concentration to one of lower concentration

a. diffusion
b. exocytosis
c. osmosis

In the space at the left, write true if the statement is true. If the statement is false, change the italicized term to make the statement true. Write this answer in the blank provided.

4. In *passive transport*, the movement of particles across a membrane requires energy.
5. *Endocytosis* is a process by which a cell membrane surrounds and takes in material from the environment.
6. A membrane that allows only some materials to pass through shows *selective permeability.*

Choose the word or phrase that best completes the statement or answers the question.

7. Which of the following is not a form of passive transport?
   diffusion **osmosis** **endocytosis**

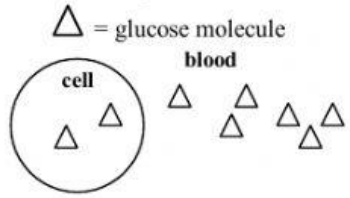
8. Diffusion continues until
   both sides are equal **turgor pressure is reached** **one side has more**

9. If a cell is placed in salt water, water leaves the cell by
   osmosis **diffusion** **active transport** **phagocytosis**

10. A cell moves particles from a region of lesser concentration to a region of higher concentration by
    diffusion **osmosis** **passive transport** **active transport**

Use the pictures on the left to answer the questions on the right.

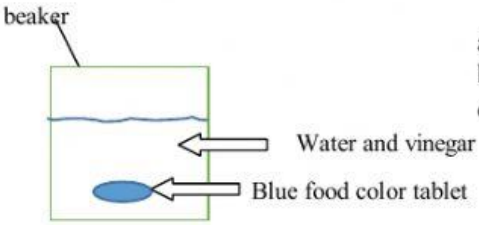
11. After digestion:



a. Which side has the higher concentration of glucose?
b. Which way will the glucose go? Into the cell or out of the cell?
c. Does this require energy?
d. Is this active or passive transport?

12. Easter egg coloring:

A blue food coloring tablet is placed in a cup of vinegar and water. The blue tablet will dissolve and spread evenly throughout the liquid.



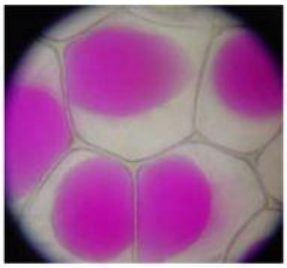
a. Is this diffusion or osmosis?
b. Does this require energy?
c. Is the blue dye going from a lower to a higher concentration, or from a higher to a lower concentration?

13. Plant cell after being over-watered.



a. Water rushes into the plant cell's vacuole. Is this diffusion or osmosis?

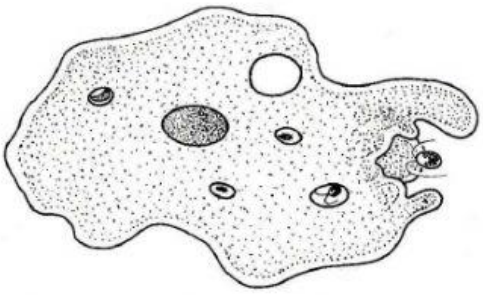
14. Plant cell after not being watered lately, so it has begun to wilt:



b. Which way will the water go? Into the vacuole, or out of the vacuole?

c. By what process will the water move?

15. An amoeba engulfs a particle of food

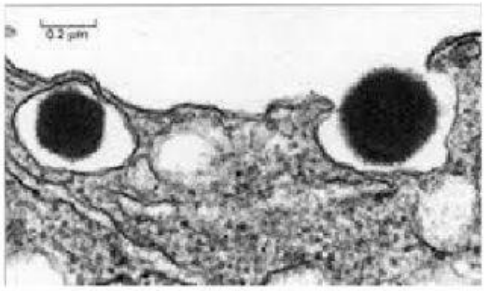


a. Does this require energy?

b. Is this active or passive transport?

c. Is this endocytosis or exocytosis?

16. An amoeba expels waste

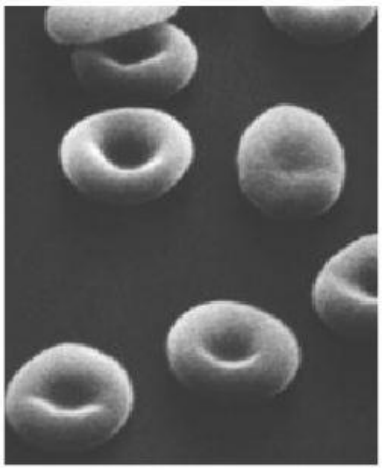


a. Does this require energy?

b. Is this active or passive transport?

c. Is this endocytosis or exocytosis?

17. Red bloods cells placed in beaker of water



a. Will water move from the red blood cells to the beaker of water, or from the beaker of water to the red blood cells?

b. Which has the higher concentration of water, the beaker of water or the red blood cells?

c. Does this require energy? ___

d. Is this diffusion or osmosis? _____

18. Describe ***diffusion***:
    - Moves things into/out of the cell (circle one or both!)
    - Moves from high to low/ low to high (circle one)
    - For large/small molecules (circle one or both!)
    - Uses/does not use protein doorway (circle one)

19. Describe ***osmosis***:
    - Moves things into/out of the cell (circle one or both!)
    - Moves from high to low/ low to high (circle one)
    - For large/small molecules (circle one or both!)
    - Uses/does not use protein doorway (circle one)

20. Describe ***passive transport:***
    - Moves things into/out of the cell (circle one or both!)
    - Moves from high to low/ low to high (circle one)
    - For large/small molecules (circle one or both!)
    - Uses/does not use protein doorway (circle one)

21. Describe ***active transport***:
    - Moves things into/out of the cell (circle one or both!)
    - Moves from high to low/ low to high (circle one)
    - For large/small molecules (circle one or both!)
    - Uses/does not use protein doorway (circle one)

22. Describe ***endocytosis***:
    - Moves things into/out of the cell (circle one or both!)
    - Moves from high to low/ low to high (circle one)
    - For large/small molecules (circle one or both!)

23. Describe ***exocytosis***:
    - Moves things into/out of the cell (circle one or both!)
    - Moves from high to low/ low to high (circle one)
    - For large/small molecules (circle one or both!)