

CELL TRANSPORT REVIEW

Cell transport – Movement of molecules in and out of the cell

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

1. _____ Large wastes or cell products are **released** from inside to outside a cell
2. _____ Diffusion of *water molecules* through a selectively permeable membrane.
3. _____ The transport of particles which **requires the use of energy**
4. _____ A state reached when particles continue to move but in *equal amounts* in and out of the cell.
5. _____ Large particles are surrounded by the membrane and **taken into the cell**.
6. _____ Movement of any particles from an area of *higher* concentration to one of *lower* concentration, with the concentration gradient.
7. _____ The transport of particles which **does not require energy**

- a. Passive transport
- b. Diffusion
- c. Dynamic equilibrium
- d. Exocytosis
- e. Osmosis
- f. Active transport
- g. Endocytosis

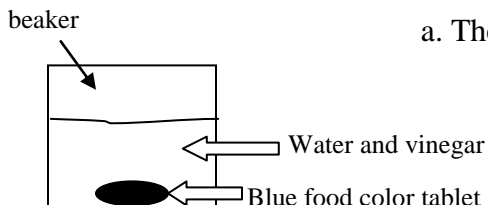
Circle the word or phrase that best completes the statement or answers the question.

8. The structure most responsible for maintaining cell homeostasis is the
 cytoplasm cell wall mitochondria plasma membrane
9. The plasma membrane (cell membrane) is made up of a(n)
 cholesterol layer enzyme layer phospholipid bilayer protein layer
10. Which of the following is NOT a form of passive transport?
 facilitated diffusion diffusion endocytosis osmosis
11. Diffusion continues until
 equilibrium is reached turgor pressure is reached one side has more
12. If a cell is placed in salt water, *water* leaves the cell by
 osmosis diffusion active transport phagocytosis
13. A cell moves particles from a region of *low concentration to a region of high concentration* by
 facilitated diffusion osmosis passive transport active transport

For each scenario, answer the questions and draw an ARROW to illustrate the movement of molecules.

14. Easter egg coloring:

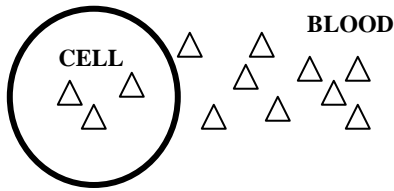
A blue food coloring tablet is placed in a cup of vinegar and water. After several seconds, the blue tablet will begin to dissolve and will eventually spread evenly throughout the liquid.



- a. The blue dye is traveling from a _____ to a _____ concentration.
- b. Identify the type of transport illustrated in this scenario:
- c. Does this movement of particles require energy?

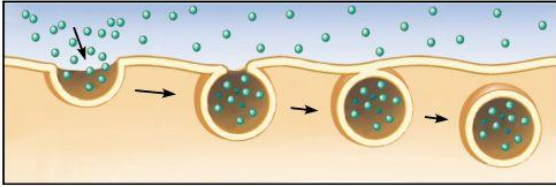
15. Following the digestion of food:

△ = glucose molecule



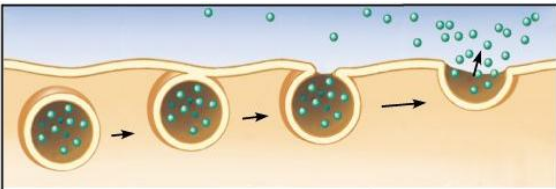
- Where is the higher concentration of glucose – blood or cell? _____
- Glucose travels through helper proteins in the cell membrane.
Identify this specific type of cell transport: _____
- Is this active or passive transport? _____
- Use an arrow to illustrate the movement of glucose molecules.

16. Movement of large particles *into* the cell:



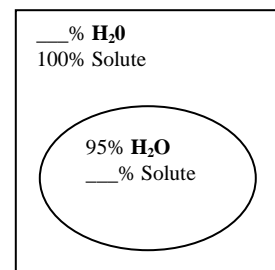
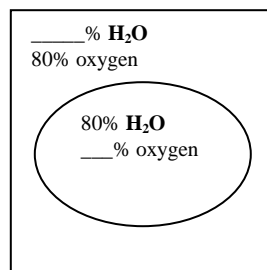
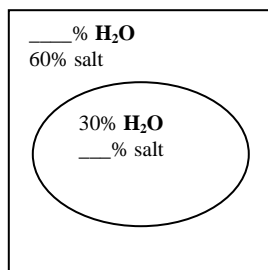
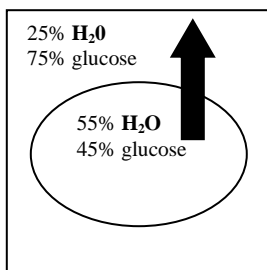
- Identify the specific type of transport being illustrated: _____
- How are the molecules being moved?
_____ concentration → _____ concentration
- Does this require energy? _____

17. Movement of large particles *out* of the cell:



- Identify the specific type of transport being illustrated: _____
- Is this active or passive transport? _____
- What type of substances would be moved in this way? _____

18. For the boxes seen below, do the calculations (each environment must equal 100%), draw an **ARROW** to illustrate the direction of water movement. State whether the solution is **hypertonic**, **hypotonic**, or **isotonic**.



OSMOSIS

Water leaves cell.
Cell shrinks.
Hypertonic solution

