Name _____ Date _____ Class _____

8 Cellular Transport and the Cell Cycle

Reinforcement and Study Guide

Section 8.1 Cellular Transport

In your textbook, read about osmosis, diffusion of water.

Complete the table by checking the correct column for each statement.

Statement	Isotonic Solution	Hypotonic Solution	Hypertonic Solution
1 Causes a cell to swell		✓	
2 Doesn't change the shape of a cell	✓		
3 Causes osmosis	✓	✓	✓
4 Causes a cell to shrink			✓

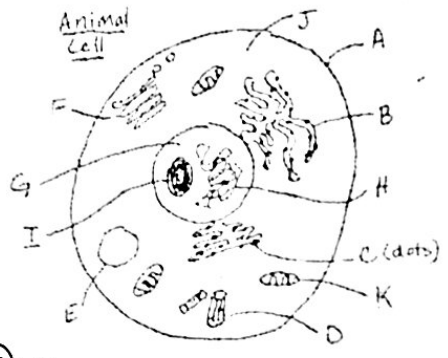
In your textbook, read about passive transport and active transport.

For each item in Column A, write the letter of the matching item in Column B.

Column A		Column B
H	5. Transport protein that provides a tubelike opening in the plasma membrane through which particles can diffuse	a. energy
A	6. Is used during active transport but not passive transport	b. facilitated diffusion
C	7. Process by which a cell takes in material by forming a vacuole around it	c. endocytosis
D	8. Particle movement from an area of higher concentration to an area of lower concentration	d. passive transport
F	9. Process by which a cell expels wastes from a vacuole	e. active transport
B	10. A form of passive transport that uses transport proteins	f. exocytosis
E	11. Particle movement from an area of lower concentration to an area of higher concentration	g. carrier protein
G	12. Transport protein that changes shape when a particle binds with it	h. channel protein

Cells Review

1. On the cell below, label the parts listed and write the functions of each.



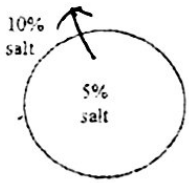
a. Cytoplasm - holds/baths organelles (J)
b. Plasma membrane - allows in out/cell (A)
c. Chromatin - DNA type (H)
d. Rough ER - transports proteins (B)
e. Centrioles - used for cell reproduction (D)
f. Golgi body - ships & packages proteins (F)
g. Vacuole - stores water, food, enzymes (E)
h. Nucleus - hold DNA - controls cell (G)
i. Nucleolus - creates ribosomes (I)
j. Mitochondrion - conducts cellular respiration (energy)
k. Ribosomes - makes proteins (C)

2. Name the three parts of cell theory ① All things come from preexisting cells, ② Cells are the basic unit of life ③ All living things are made of cells
3. Name 3 differences between plant and animal cells plants have cell wall, chloroplasts, + large vacuole
4. Mark the examples below as active (A) or passive (P) transport.
   a. Diffusion P
   b. Facilitated diffusion P
   c. Carrier protein pump A
   d. osmosis P
   e. endocytosis A
   f. exocytosis A
5. What is the difference between active and passive transport? active requires energy (ATP)
6. What substance did we use to view the nucleus of an onion and cheek cell? stain (gram)
7. What are the three components of the plasma membrane? Draw a picture and label the parts.

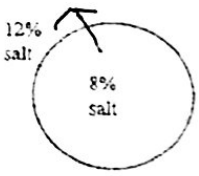
carbohydrate
integral protein
cholesterol
phospholipid

8. Each circle below represents a cell that is permeable to WATER ONLY. For each, 1) indicate if the environment the cell is in is hypotonic, hypertonic, or isotonic to the cell, and 2) draw an arrow indicating the direction the water will flow.

Isotonic



Hypertonic



Hypertonic

True or False

T 1. Cholesterol is found in the plasma membrane.
F 2. The plasma membrane is the ~~same~~ not same membrane as the nucleat membrane. made of same thing though
F 3. ~~Ribosomes~~ Mitochondria are the power plant of the cell.
F 4. ~~Animal~~ plant cells have cell walls
T 5. Plant cells have mitochondria
F 6. Prokaryotic cells are ~~larger~~ smaller than eukaryotic cells
T 7. Organelles are smaller than cells
F 8. ~~Cells~~ tissues of the same type working together make up an organ.
T 9. A lysosome is an organelle
T 10. Cell walls in plants are made of cellulose
T 11. Mitochondria and chloroplasts have 2 membranes around them. endosymbiotic theory
T 12. Phopholipids are nonpolar and polar.
hydrophobic hydrophilic.