Chapter 7-3, 7-4 Prep Test

Multiple Choice
Identify the choice that best completes the statement or answers the question.

____ 1. Which of the following structures serves as the cell's boundary from its environment?
a. mitochondrion
b. cell membrane
c. chloroplast
d. channel protein

____ 2. Which of the following is a function of the cell membrane?
a. breaks down lipids, carbohydrates, and proteins from foods
b. stores water, salt, proteins, and carbohydrates
c. keeps the cell wall in place
d. regulates the movement of materials into and out of the cell

____ 3. The cell membrane contains channels and pumps that help move materials from one side to the other. What are these channels and pumps made of?
a. carbohydrates
b. lipids
c. bilipids
d. proteins

____ 4. Diffusion occurs because
a. molecules are attracted to one another.
b. molecules constantly move and collide with each other.
c. cellular energy forces molecules to collide with each other.
d. cellular energy pumps molecules across the cell membrane.

____ 5. During diffusion, when the concentration of molecules on both sides of a membrane is the same, the molecules will
a. move across the membrane to the outside of the cell.
b. stop moving across the membrane.
c. continue to move across the membrane in both directions.
d. move across the membrane to the inside of the cell.

____ 6. The diffusion of water across a selectively permeable membrane is called
a. osmotic pressure.
b. osmosis.
c. pinocytosis.
d. active transport.

____ 7. An animal cell that is surrounded by fresh water will burst because the osmotic pressure causes
a. water to move into the cell.
b. water to move out of the cell.
c. solutes to move into the cell.
d. solutes to move out of the cell.

____ 8. Which means of particle transport requires input of energy from the cell?
   a. diffusion
   b. osmosis
   c. facilitated diffusion
   d. active transport

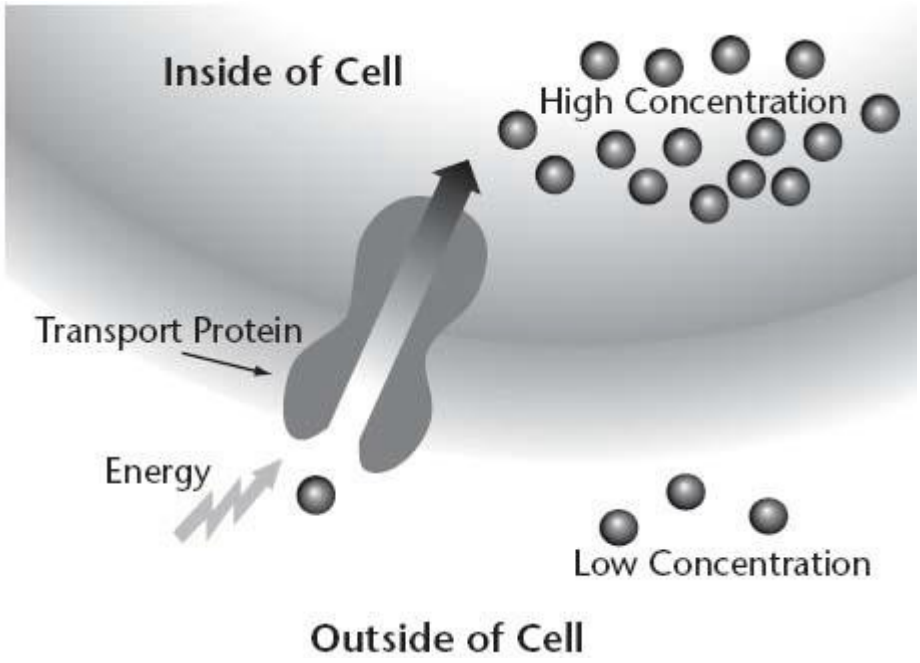

Figure 7–4

____ 9. Which means of particle transport is shown in Figure 7–4 above?
   a. diffusion
   b. osmosis
   c. facilitated diffusion
   d. active transport

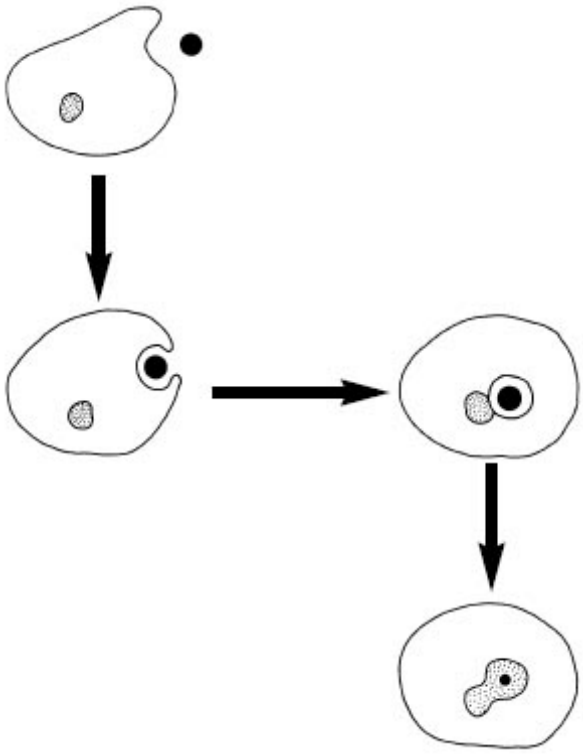

Figure 7–5

____ 10. Which means of particle transport is shown in Figure 7–5 above?
a. endocytosis
b. exocytosis
c. facilitated diffusion
d. protein pump

____ 11. Which of the following activities is NOT a way that unicellular organisms maintain homeostasis?
a. reproduction
b. growth
c. cell specialization
d. response to the environment

____ 12. Which term describes the relatively constant internal physical conditions of an organism?
a. cell specialization
b. homeostasis
c. organ system
d. unicellularity

____ 13. Which of the following is an example of an organ?
a. heart
b. epithelial tissue
c. digestive system
d. nerve cell

____ 14. A group of similar cells that perform a particular function is called
   a. an organ.
   b. an organ system.
   c. a tissue.
   d. a division of labor.

____ 15. Which list represents the levels of organization in a multicellular organism from the simplest level to the most complex level?
   a. cell, tissue, organ system, organ
   b. organ system, organ, tissue, cell
   c. tissue, organ, organ system, cell
   d. cell, tissue, organ, organ system

Modified True/False
Indicate whether the statement is true or false. If false, change the identified word or phrase to make the statement true.

____ 1. Water, carbon dioxide, oxygen, and some other substances <u>can</u> pass through the cell wall.
_____

____ 2. Once <u>equilibrium</u> is reached, roughly equal numbers of molecules move in either direction across a semipermeable membrane, and there is no further change in concentration on either side of the membrane.
_____

____ 3. Moving materials from an area of low concentration to an area of high concentration requires <u>active</u> transport.
_____

Chapter 7-3, 7-4 Prep Test
Answer Section

MULTIPLE CHOICE

1. ANS: B PTS: 1 DIF: L1 REF: p. 203
   OBJ: 7.2.5 Describe the function of the cell membrane. STA: OH.LS.I10.2
   TOP: Foundation Edition BLM: knowledge
2. ANS: D PTS: 1 DIF: L1 REF: p. 204
   OBJ: 7.2.5 Describe the function of the cell membrane. STA: OH.LS.I10.2
   TOP: Foundation Edition BLM: comprehension
3. ANS: D PTS: 1 DIF: L3 REF: p. 204
   OBJ: 7.2.5 Describe the function of the cell membrane. STA: OH.LS.I10.2
   BLM: synthesis
4. ANS: B PTS: 1 DIF: L2 REF: p. 209
   OBJ: 7.3.1 Describe passive transport. STA: OH.LS.I10.3.c
   BLM: comprehension
5. ANS: C PTS: 1 DIF: L2 REF: p. 209
   OBJ: 7.3.1 Describe passive transport. STA: OH.LS.I10.3.c
   TOP: Foundation Edition BLM: comprehension
6. ANS: B PTS: 1 DIF: L1 REF: p. 210
   OBJ: 7.3.1 Describe passive transport. STA: OH.LS.I10.3.c
   TOP: Foundation Edition BLM: knowledge
7. ANS: A PTS: 1 DIF: L2 REF: p. 211
   OBJ: 7.3.1 Describe passive transport. STA: OH.LS.I10.3.c
   BLM: application
8. ANS: D PTS: 1 DIF: L2 REF: p. 212
   OBJ: 7.3.2 Describe active transport. STA: OH.LS.I10.3.c
   TOP: Foundation Edition BLM: comprehension
9. ANS: D PTS: 1 DIF: L2 REF: p. 212
   OBJ: 7.3.2 Describe active transport. STA: OH.LS.I10.3.c
   TOP: Foundation Edition BLM: application
10. ANS: A PTS: 1 DIF: L2 REF: p. 213
    OBJ: 7.3.2 Describe active transport. STA: OH.LS.I10.3.c
    TOP: Foundation Edition BLM: application
11. ANS: C PTS: 1 DIF: L2 REF: p. 214
    OBJ: 7.4.1 Explain how unicellular organisms maintain homeostasis.
    STA: OH.LS.I10.3.a TOP: Foundation Edition
    BLM: comprehension
12. ANS: B PTS: 1 DIF: L1 REF: p. 214
    OBJ: 7.4.1 Explain how unicellular organisms maintain homeostasis.
    STA: OH.LS.I10.3.a TOP: Foundation Edition
    BLM: knowledge
13. ANS: A PTS: 1 DIF: L2 REF: p. 216
    OBJ: 7.4.2 Explain how multicellular organism maintain homeostasis.
    STA: OH.LS.I10.3.a TOP: Foundation Edition
    BLM: application
14. ANS: C PTS: 1 DIF: L1 REF: p. 216

OBJ: 7.4.2 Explain how multicellular organism maintain homeostasis.
STA: OH.LS.I10.3.a TOP: Foundation Edition
BLM: knowledge

15. ANS: D PTS: 1 DIF: L3 REF: p. 216
OBJ: 7.4.2 Explain how multicellular organism maintain homeostasis.
STA: OH.LS.I10.3.a BLM: analysis

MODIFIED TRUE/FALSE

1. ANS: T PTS: 1 DIF: L2
REF: p. 205 OBJ: 7.2.5 Describe the function of the cell membrane.
STA: OH.LS.I10.2 TOP: Foundation Edition
BLM: comprehension
2. ANS: T PTS: 1 DIF: L2
REF: p. 209 OBJ: 7.3.1 Describe passive transport. STA: OH.LS.I10.3.c
BLM: comprehension
3. ANS: T PTS: 1 DIF: L3
REF: p. 212 OBJ: 7.3.2 Describe active transport. STA: OH.LS.I10.3.c
BLM: synthesis