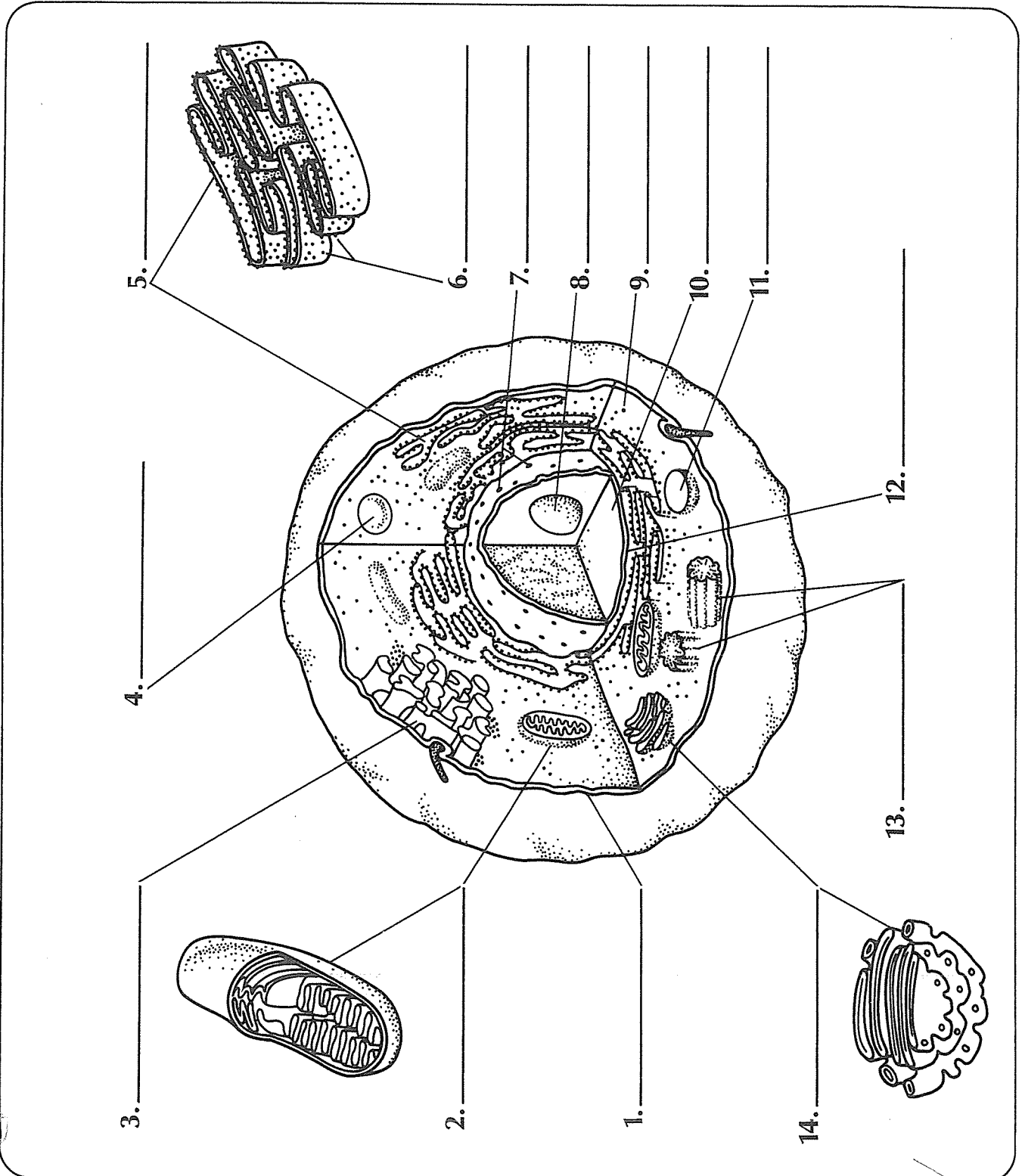


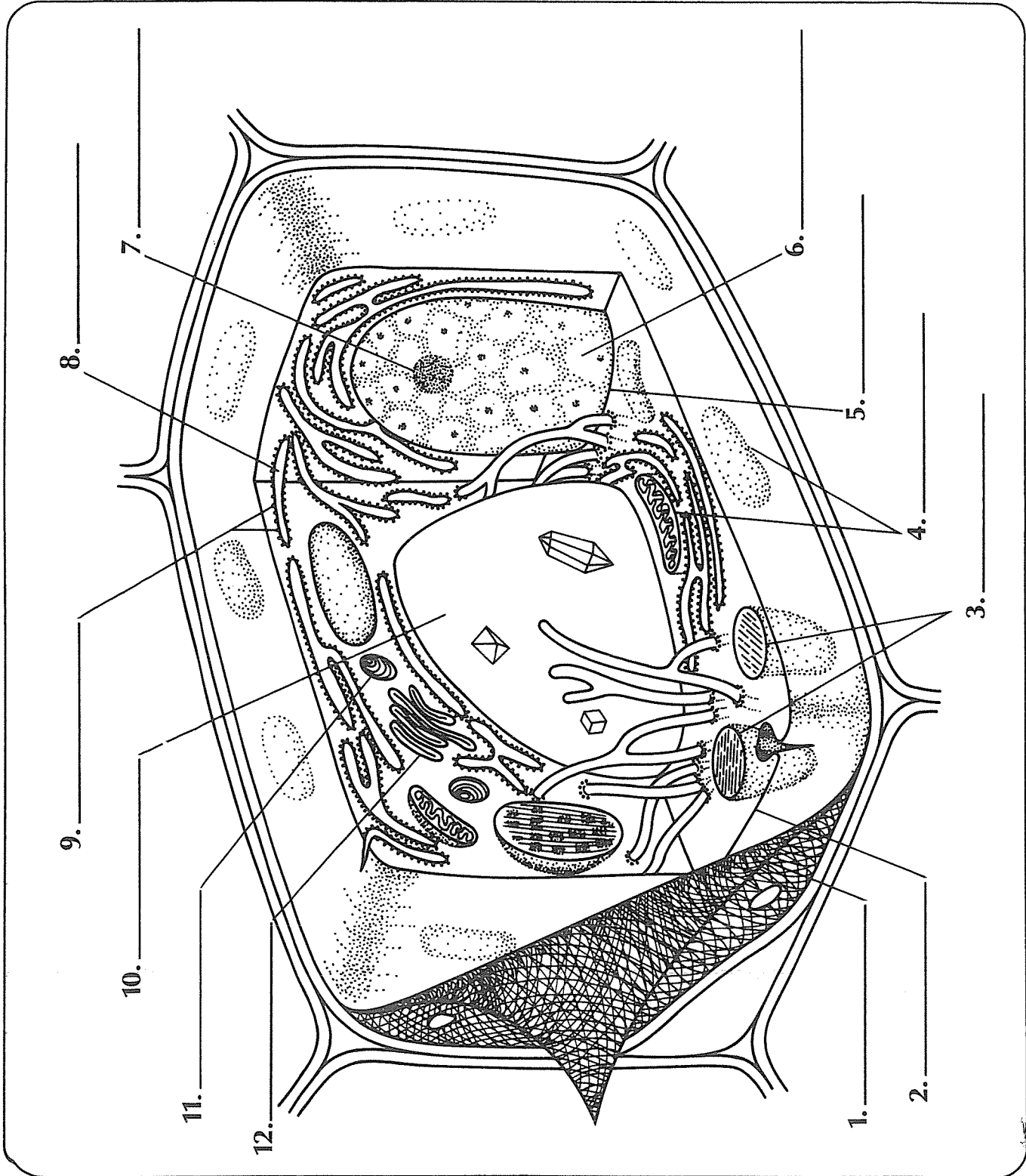
OVERHEAD TRANSPARENCY MASTER

Generalized Structure of an Animal Cell



OVERHEAD TRANSPARENCY MASTER

Generalized Structure of a Plant Cell



TEST
Part A

CHAPTER **5**

MATCHING QUESTIONS

From the list below, select the term that best fits each of the following descriptions. Each term may be used more than once, but there is only one correct answer for each question.

- a. osmosis
- b. diffusion
- c. pinocytosis
- d. phagocytosis

1. process in which liquids or small particles are taken into the cell from the surrounding medium 1. ____
2. movement of water from an area of greater concentration to an area of lesser concentration 2. ____
3. ingestion of large particles or even small organisms by a cell 3. ____

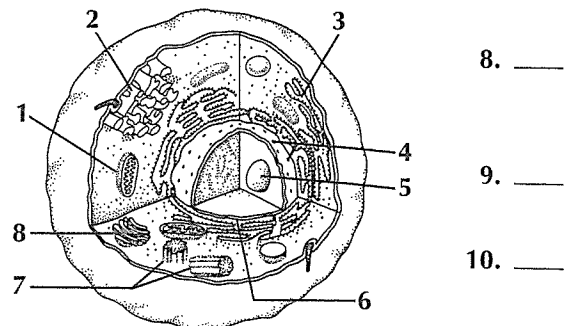
MULTIPLE-CHOICE QUESTIONS

Select the lettered choice that best fits each question or statement. In each case, there is only one correct choice.

4. Which is NOT part of the cell theory? 4. ____
 - a. Cells vary in size but have the same shape.
 - b. All organisms are made of one or more cells.
 - c. All cells carry on their own life activities.
 - d. New cells arise only from other living cells.
5. Mitochondria, ribosomes, and vacuoles are examples of 5. ____
 - a. tissues
 - b. cells
 - c. organs
 - d. organelles
6. Which of the following organisms possess prokaryotic cells? 6. ____
 - a. ameba
 - b. bacteria
 - c. fungi
 - d. humans
7. A cell with 96% concentration of water molecules and 4% concentration of dissolved substances is placed in a hypertonic solution. The water molecule concentration of the solution could be 7. ____
 - a. 100%
 - b. 98%
 - c. 96%
 - d. 94%

Questions 8–10 refer to the diagram below.

8. composed of DNA, RNA, and protein and is the site of ribosome formation 8. ____
 - a. 3
 - b. 5
 - c. 7
 - d. 8
9. site of cellular respiration 9. ____
 - a. 1
 - b. 3
 - c. 6
 - d. 7
10. composed of microtubules and involved in the process of cell division 10. ____
 - a. 2
 - b. 3
 - c. 6
 - d. 7



Part B-1**MULTIPLE-CHOICE QUESTIONS (continued)**

11. A solution that has the same concentration of dissolved substances as a living cell is called 11. ____
a. homogenous c. hypertonic
b. isotonic d. hypotonic
12. The watery material lying within the cell between the cell membrane and the nucleus is 12. ____
the
a. chloroplast c. cytoplasm
b. endoplasmic reticulum d. plastid
13. Cells that use a great amount of energy usually contain numerous 13. ____
a. lysosomes c. vacuoles
b. ribosomes d. mitochondria
14. Robert Hooke was the first scientist to use the term 14. ____
a. cell c. nucleus
b. microscope d. protoplasm
15. As the surface area of a cell increases in size, the volume of the cell 15. ____
a. increases relatively more than the surface area
b. increases about the same as the surface area
c. decreases
d. does not change
16. The cell wall 16. ____
a. is found in animal cells
b. is not found in bacteria
c. lies inside the cell membrane
d. has small openings
17. Lamellae, grana, and stroma are closely associated with the 17. ____
a. chloroplast c. mitochondria
b. nucleus d. cell membrane
18. Endosymbiosis refers to the 18. ____
a. selective permeability of the cell membrane
b. origin of the eukaryotic cell
c. function of an organelle in the cytoplasm
d. osmotic pressure in a solution

SHORT-ANSWER QUESTIONS

In one or two complete sentences, answer the following questions on a separate sheet of paper.

19. What is the function of the ribosome?
20. Name and give the functions of the three types of muscle tissue.
21. What causes molecules to diffuse?

ESSAY QUESTION

In one or two paragraphs, answer the following question on a separate sheet of paper.

22. What are the major structural differences between plant and animal cells?

MULTIPLE-CHOICE QUESTIONS (continued)

11. Which of the following statements about the cell membrane is CORRECT? 11. ____
- It has a rigid structure composed of cellulose.
 - It prevents the exit of all substances from the cell.
 - It is a fluid-filled organelle surrounding the nucleolus.
 - It is a two-layered structure composed of lipids and proteins.
12. Which is NOT a function of lysosomes? 12. ____
- digestion of food
 - decompose worn-out organelles
 - fight against disease
 - protein synthesis
13. A plant cell would exhibit the greatest osmotic pressure when placed in which of the following liquids? 13. ____
- distilled water
 - an isotonic solution
 - a 5% salt solution
 - a 20% sugar solution
14. Processes that require energy and work against a concentration gradient include which of the following? 14. ____
- facilitated diffusion
 - active transport
 - osmosis
- I only
 - II only
 - I and II only
 - I, II, and III
15. _____ theorized that all plants were made up of cells, and Robert Brown noted that the _____ was a common feature of all plant cells. 15. ____
- Hooke; cell wall
 - Schwann; protoplasm
 - Purkinje; cell membrane
 - Schleiden; chloroplast
16. Lamellae are _____ within the _____. 16. ____
- sacs; mitochondria
 - channels; endoplasmic reticulum
 - threads; nucleus
 - membranes; chloroplast

SHORT-ANSWER QUESTIONS

In one or two complete sentences, answer the following questions on a separate sheet of paper.

17. Suppose a cell were treated with an active transport inhibitor. What would happen?
18. What is the function of the pores in the nuclear envelope?
19. Why is the endosymbiotic theory important to biologists?

ESSAY QUESTIONS

In one or two paragraphs, answer the following questions on a separate sheet of paper.

20. Explain why cells of unicellular organisms are more independent than cells of multicellular organisms.
21. What would happen to an animal cell with an internal salt concentration of 0.8% if it were placed in each of the following solutions?
- 0.02%
 - 0.8%
 - 20.0%