

Chapter 7 Cell Structure and Function**Chapter Test B****Multiple Choice**

Write the letter that best answers the question or completes the statement on the line provided.

- ____ 1. Who was the first person to identify and see cells?
- a. Anton van Leeuwenhoek
 - b. Robert Hooke
 - c. Matthias Schleiden
 - d. Rudolf Virchow
- ____ 2. The thin, flexible barrier around a cell is called the
- a. cell membrane.
 - b. cell wall.
 - c. cell envelope.
 - d. cytoplasm.
- ____ 3. Prokaryotes lack
- a. cytoplasm.
 - b. a cell membrane.
 - c. a nucleus.
 - d. genetic material.
- ____ 4. Which of the following contains a nucleus?
- a. prokaryotes
 - b. bacteria
 - c. eukaryotes
 - d. organelles
- ____ 5. The main function of the cell wall is to
- a. support and protect the cell.
 - b. store DNA.
 - c. direct the activities of the cell.
 - d. help the cell move.
- ____ 6. Which of the following is a function of the nucleus?
- a. stores DNA
 - b. controls most of the cell's processes
 - c. contains the information needed to make proteins
 - d. all of the above
- ____ 7. Which of the following is a function of the cytoskeleton?
- a. helps a cell keep its shape
 - b. contains DNA
 - c. surrounds the cell
 - d. helps make proteins

- ____ 8. Which of the following is an organelle found in the cytoplasm?
- a. nucleolus
 - b. ribosome
 - c. chromatin
 - d. cell wall
- ____ 9. Which organelle would you expect to find in plant cells?
- a. mitochondrion
 - b. ribosome
 - c. chloroplast
 - d. smooth endoplasmic reticulum
- ____ 10. Which of the following structures serves as the cell's boundary from its environment?
- a. mitochondrion
 - b. cell membrane
 - c. chloroplast
 - d. channel proteins
- ____ 11. Diffusion is the movement of particles from
- a. an area of low concentration to an area of high concentration.
 - b. an area of high concentration to an area of low concentration.
 - c. an area of equilibrium to an area of high concentration.
 - d. all of the above
- ____ 12. The diffusion of water across a selectively permeable membrane is called
- a. osmotic pressure.
 - b. osmosis.
 - c. facilitated diffusion.
 - d. active transport.
- ____ 13. Which term refers to cells having different tasks in an organism?
- a. multicellular
 - b. cell specialization
 - c. levels of organization
 - d. unicellular
- ____ 14. Which of the following is an example of an organ?
- a. heart
 - b. epithelial tissue
 - c. digestive system
 - d. nerve cell
- ____ 15. A group of similar cells that perform a particular function is called a(an)
- a. organ.
 - b. organ system.
 - c. tissue.
 - d. division of labor.

Completion

Complete each statement on the line provided.

16. The portion of the cell outside the nucleus is called the _____ .
17. Eukaryotes contain structures that act as if they are specialized organs. These structures are called _____ .
18. Molecules tend to move from an area where they are more concentrated to an area where they are less concentrated. This process is called _____ .
19. The cells in a multicellular organism have specific jobs. This is called cell _____ .
20. The levels of organization in a multicellular organism are _____ , tissues, _____ , and organ systems.

Short Answer

In complete sentences, write the answers to the questions on the lines provided.

21. What does the cell theory state?

22. What are two functions of the nucleus?

23. List two functions of the cytoskeleton.

24. Explain, in terms of osmosis, why a raisin placed in a cup of pure water overnight will puff up with water.

25. List the four levels of organization in order from simplest to most complex.

Using Science Skills

Use the diagrams below to answer the following questions on the lines provided.

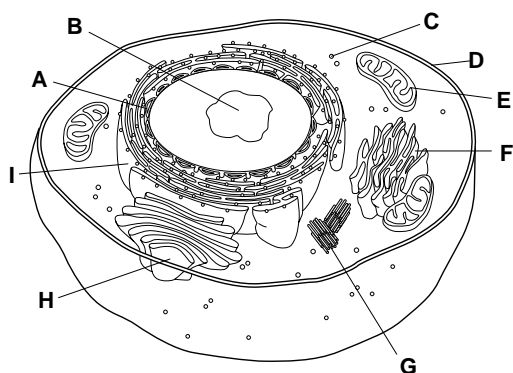


Figure 7-1

Diagram I

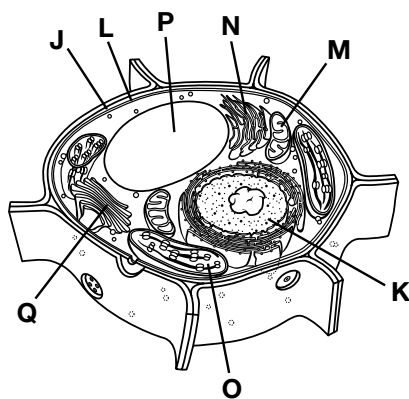


Diagram II

26. **Interpreting Graphics** Which drawing in Figure 7-1 contains a structure that captures sunlight and converts it into chemical energy? What is the name of the structure described, and what is it labeled in the diagram?

27. **Comparing and Contrasting** Look at Figure 7-1. Give the letter of the structure in drawing I that corresponds to structure M in drawing II. What is the name of this structure?

28. **Comparing and Contrasting** Give the letter of the structure in drawing I of Figure 7-1 that corresponds to structure L in drawing II. What is the name of this structure?

29. **Interpreting Graphics** Which organelle is labeled P in Figure 7-1? What is the function of this organelle?

30. **Interpreting Graphics** Do the drawings in Figure 7-1 represent prokaryotes or eukaryotes? How do you know?
