Q1W5-Bio10-A view of the cell- H.W.

Matching

Match each item with the correct statement below.

a. Schleiden

- d. Schwann
- b. compound light microscope
- electron microscope c.

- e. Hooke
- f. van Leeuwenhoek
- 1. A scientist who concluded that all animals are composed of cells
 - 2. Uses two or more glass lenses to magnify either living cells or prepared slides
- 3. A scientist who concluded that all plants are composed of cells
- 4. The first scientist to describe living cells as seen through a simple microscope
- 5. The microscope that allowed scientists to view molecules
- 6. A scientist who observed that cork was composed of tiny, hollow boxes that he called cells

Multiple Choice

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

- 7. A cell's contents would be the same as its surrounds, were it not for _____.
 - a. plasmolysis

c. dynamic equilibrium

b. phagocytosis

d. selective permeability



- Figure 7-3
- 8. What is the approximate size of B in figure 7-3?
 - a. 700 µm 500 µm c.
 - b. 1000 μm d. 400 µm
 - 9. What is the approximate size of A in Figure 7-3?
 - a. 400 µm 700 µm с.
 - b. 500 μm d. 1000 µm
- 10. What would be the best way to estimate the size of C in Figure 7-3?
 - a. estimate by what you can see c. assume it is 2000 µm
 - b. decrease magnification d. increase magnification
 - 11. Because the phospholipid molecules and some proteins are free to move, the plasma membrane is said to be a

a.	fluid mosaic	c.	bilayer
b.	fatty acid	d.	solid

- 12. Who concluded that all plants are made of living cells?
 - Virchow c. Schwann
 - b. Schleiden d. Hooke
- 13. Each of the following is a main idea of the cell theory <u>except</u>
 - a. all organisms are composed of cells

a.

- b. all cells are similar in structure and function
- c. all cells come from preexisting cells
- d. the cell is the basic unit of organization of organisms
- _____ 14. Which of the following organisms do not have cell walls?
 - a. bacteria c. fungi
 - b. animals d. plants
- _____ 15. The fluid mosaic model describes a structure with _____.
 - a. nonpolar layers on both inside and outside
 - b. polar layers on both inside and outside
 - c. polar layers on the outside and nonpolar layer on the inside
 - d. nonpolar layers on the outside and a polar layer on the inside
- ____ 16. A plasma membrane is made up of a(n) _____
 - a. enzyme bilayer c. protein layer
 - b. cholesterol layer d. lipid bilayer







 21.	Which parts of Figure 7-6 are in a prokaryo	tic cell?	?	
	a. C and J	с.	A and K	
	b. D and M	d.	G and L	
 22.	Which structure in Figure 7-6 transforms en	ergy?		
	a. C	c.	G	
	b. K	d.	J	
 23.	Which structure in Figure 7-6 is responsible	is responsible for chemical reactions?		
	a. L	с.	А	
	b. E	d.	J	
 24.	Which structure in Figure 7-6 is the cell cor	is the cell control center?		
	a. G	с.	Ι	
	b. M	d.	А	
 25.	Which structure in Figure 7-6 maintains hor	neostas	sis?	
	a. L	с.	Н	
	b. B	d.	D	
 26.	Which structure in Figure 7-6 sorts and tran	sports?		
	a. B	c.	Ι	
	b. M	d.	G	
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27. A cell contains the structure shown in Figure 7-7. What other cell structure that is not found in all eukaryotic cells is likely to be found in this cell?



Figure 7-7

a. mitochondria

c. plasma membrane

- b. ribosomes d. cell wall
- 28. All living things are made up of _____
 - a. cork

- cells c.
- b. cellulose d. wastes
- 29. Which of the following is NOT true of plasma membranes?
 - Folded membranes do not form compartments in the cell. a.
 - Ribosomes are sometimes attached to folded membranes. b.
 - c. Folded membranes increase surface area for efficiency.
 - d. Endoplasmic reticulum is made up of folded membranes.
- The scientist who first described living cells as seen through a simple microscope was _____. 30.
 - c. Schwann a. Hooke
 - b. Schleiden d. van Leeuwenhoek
- 31. One advantage of electron microscopes over light microscopes is their
 - a. use of live specimens c. two-dimensional image size b.
 - d. higher magnification
- 32. Which of the following might be a result of a disease that causes a thickened plasma membrane?
 - a. increased movement of molecules entering the cell
 - b. decreased movement of molecules entering the cell
 - c. increased movement of molecules leaving the cell
 - d. decreased movement of molecules within the cell
 - Which is not a way that Figure 7-2 is a model of cellular theory? 33.



Figure 7-2

- there are many bricks in a building a.
- b. bricks are organized to make a larger unit
- bricks are solid c.
- d. bricks are small units in a building
- Which of the following pictures in Figure 7-5 most likely approximate the motion phospholipids make in a 34. plasma membrane?





- a. D c. A b. B d. C 35. What do electron microscopes use to focus and magnify an image? a. light c. X rays d. glass lenses b. electron beams 36. Folded membranes are an advantage to a cell because _____. a. the membranes provide a large surface area b. the membranes form interconnected compartments c. cell processes can be more efficient d. all of these _ 37. Because cells have a watery environment both inside and outside, the polar ends of the phospholipids in the plasma membrane form _____ layers a. double c. mosaic b. single d. several 38. If a cell contains a nucleus, it must be a(n) _____ _. a. eukaryotic cell c. animal cell
 - b. prokaryotic cell d. plant cell

Completion

Complete each statement.

COMPLETION

- A. cilia
- B. ribosomes
- C. chloroplasts
- D. plasma membrane

- E. cell wall
- F. chromatin
- G. organelles
- H. prokaryote
- I. chlorophyll
- J. lysosomes

39.	Short, hairlike projections used for locomotion are
40.	The movement of materials into and out of the cells is controlled by the
41.	In plants, the structures that transform light energy into chemical energy are called
42.	In a cell, the tangles of long strands of DNA form the
43.	A structure outside the plasma membrane in some cells is the
44.	The small, membrane-bound structures inside a cell are
45.	An organism with a cell that lacks a true nucleus is a(n)
46.	Cell structures that contain digestive enzymes are

- 47. The pigment that gives plants their green color is _____
- 48. In a cell, the sites of protein synthesis are the ______.

True/False

Indicate whether the statement is true or false.

- 49. Transport proteins span the cell membrane, allowing the selectively permeable membrane to regulate which molecules enter and leave a cell.
 50. Eukaryotic plasma membranes can contain cholesterol, which tends to make the membrane more stable.
 51. A phospholipid molecule has a nonpolar, water-insoluble head attached to a long polar, soluble tail.
- _____ 52. The plasma membrane is a bilayer of lipid molecules with protein molecules embedded in it.
- _____ 53. The fluid mosaic model describes the plasma membrane as a structure that is liquid and very rigid.
- _____ 54. Proteins at the inner surface of the plasma membrane attach the membrane to the cell's support structure, making the cell rigid.
- 55. The structure and properties of the cell wall allow it to be selective and maintain homeostasis.
