

Honors Biology Ch 7 PRACTICE QUIZ

Multiple Choice

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

- _____ 1. Who was one of the first people to identify and see cork cells?
- a. Anton van Leeuwenhoek
 - b. Robert Hooke
 - c. Matthias Schleiden
 - d. Rudolf Virchow
- _____ 2. Which of the following is NOT a principle of the cell theory?
- a. Cells are the basic units of life.
 - b. All living things are made of cells.
 - c. Very few cells reproduce.
 - d. All cells are produced by existing cells.
- _____ 3. The cell theory applies to
- a. bacteria.
 - b. plants and animals.
 - c. multicellular organisms.
 - d. all of the above
- _____ 4. Looking at a cell under a microscope, you note that it is a prokaryote. How do you know?
- a. The cell lacks cytoplasm.
 - b. The cell lacks a cell membrane.
 - c. The cell lacks a nucleus.
 - d. The cell lacks genetic material.
- _____ 5. Which of the following contain a nucleus?
- a. prokaryotes
 - b. bacteria
 - c. eukaryotes
 - d. organelles
- _____ 6. Eukaryotes usually contain
- a. a nucleus.
 - b. specialized organelles.
 - c. genetic material.
 - d. all of the above
- _____ 7. Which of the following organisms are prokaryotes?
- a. plants
 - b. animals
 - c. bacteria
 - d. all of the above
- _____ 8. 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
- _____ 9. Which of the following is NOT found in the nucleus?
- a. cytoplasm
 - b. nucleolus
 - c. chromatin
 - d. DNA
- _____ 10. Which of the following statements explains why the nucleus is important to cells?
- a. Only eukaryotes have nuclei.
 - b. Only prokaryotes have nuclei.
 - c. The nucleus contains coded instructions for making proteins.
 - d. The nucleus is surrounded by a nuclear envelope.

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- _____ 11. Which of the following structures is found in the cytoplasm?
- a. nucleolus
 - b. ribosome
 - c. chromatin
 - d. cell wall
- _____ 12. Which organelle breaks down food into molecules the cell can use?
- a. Golgi apparatus
 - b. lysosome
 - c. endoplasmic reticulum
 - d. mitochondrion
- _____ 13. Which structure makes proteins using coded instructions that come from the nucleus?
- a. Golgi apparatus
 - b. mitochondrion
 - c. vacuole
 - d. ribosome
- _____ 14. Which organelle converts the chemical energy stored in food into compounds that are more convenient for the cell to use?
- a. chloroplast
 - b. Golgi apparatus
 - c. endoplasmic reticulum
 - d. mitochondrion
- _____ 15. Which organelles help provide cells with energy?
- a. mitochondria and chloroplasts
 - b. rough endoplasmic reticulum
 - c. smooth endoplasmic reticulum
 - d. Golgi apparatus and ribosomes
- _____ 16. Which organelle would you expect to find in plant cells but not animal cells?
- a. mitochondrion
 - b. ribosome
 - c. chloroplast
 - d. smooth endoplasmic reticulum
- _____ 17. 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.
- _____ 18. Unlike the cell membrane, the cell wall is
- a. found in all organisms.
 - b. composed of a lipid bilayer.
 - c. a flexible barrier.
 - d. usually made of tough fibers.
- _____ 19. You will NOT find a cell wall in which of these kinds of organisms?
- a. plants
 - b. animals
 - c. fungi
 - d. all of the above
- _____ 20. Which of the following structures serves as the cell's boundary from its environment?
- a. mitochondrion
 - b. cell membrane
 - c. chloroplast
 - d. channel proteins
- _____ 21. 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 which materials enter and leave the cell
- _____ 22. 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

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- _____ 23. Diffusion is the movement of molecules from
- an area of low concentration to an area of high concentration.
 - an area of high concentration to an area of low concentration.
 - an area of equilibrium to an area of high concentration.
 - all of the above
- _____ 24. Diffusion occurs because
- molecules constantly move and collide with each other.
 - the concentration of a solution is never the same throughout a solution.
 - the concentration of a solution is always the same throughout a solution.
 - molecules never move or collide with each other.
- _____ 25. Which means of particle transport requires input of energy from the cell?
- diffusion
 - osmosis
 - facilitated diffusion
 - active transport
- _____ 26. The diffusion of water across a selectively permeable membrane is called
- osmotic pressure.
 - osmosis.
 - facilitated diffusion.
 - active transport.
- _____ 27. An animal cell that is surrounded by fresh water will burst because the osmotic pressure causes
- water to move into the cell.
 - water to move out of the cell.
 - solutes to move into the cell.
 - solutes to move out of the cell.

Modified True/False

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

- _____ 28. If a cell contains a nucleus, it must be a prokaryote. _____

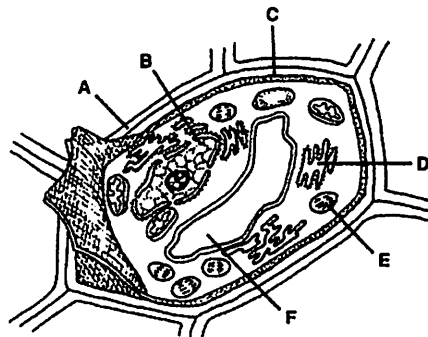


Figure 7-1

- _____ 29. The cell represented in Figure 7-1 is a eukaryote. _____
- _____ 30. Ribosomes stud the surface of rough endoplasmic reticulum. _____
- _____ 31. Many membrane proteins are made by the smooth endoplasmic reticulum. _____

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- ____ 32. The cytoskeleton helps to move organelles within the cell. _____
- ____ 33. The main function of the cell wall is to provide support and protection. _____
- ____ 34. A red blood cell placed in pure water will shrink. _____
- ____ 35. There is a division of labor among the cells of multicellular organisms. _____

Completion

Complete each statement.

36. According to the cell theory, all cells come from existing _____.
37. In a eukaryote, the material between the cell membrane and the nucleus is called the _____.

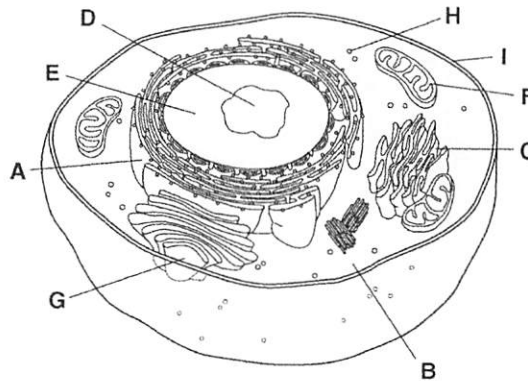


Figure 7-2

38. The material indicated in Figure 7-2 by the letter B is called the _____.
39. During cell division, chromatin condenses to form _____, which are threadlike structures containing genetic material.

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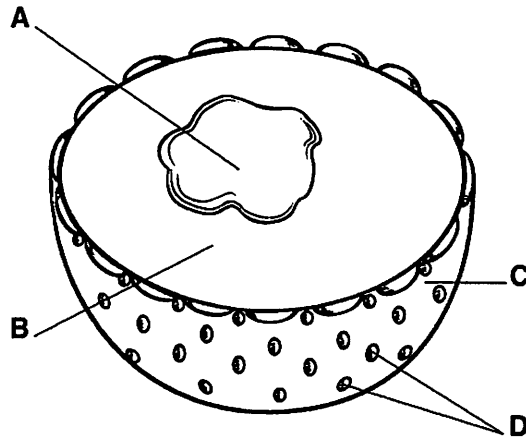


Figure 7-3

40. RNA and other molecules leave the nucleus through the structure labeled _____ in Figure 7-3.
41. Eukaryotes contain specialized structures that perform important cellular functions. These structures are called _____.
42. Unlike smooth endoplasmic reticulum, rough endoplasmic reticulum has _____ attached to it.
43. Enzymes in the _____ attach carbohydrates and lipids to proteins.

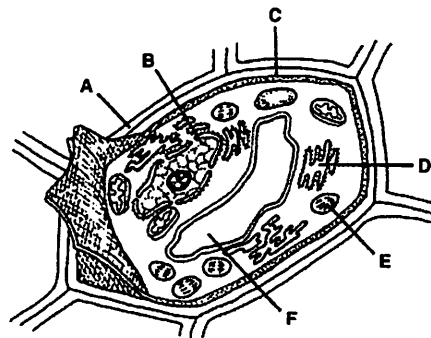


Figure 7-1

44. The structure indicated in Figure 7-1 by the letter F is usually larger in _____ cells.
45. The cell takes in food and water and eliminates wastes through the _____.
46. Molecules tend to move from an area where they are more concentrated to an area where they are less concentrated. This process is called _____.

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47. Large molecules such as glucose that cannot cross the lipid bilayer can still move across the membrane with a concentration gradient by _____.
48. The cells in a multicellular organism have specific jobs. This is called cell _____.