Name _____

Test 3

Biology **Chapter 3**

Multiple Choice (2 pts)

Read the entire item before choosing your answer. Only one choice is correct. Write the letter of your choice in the blank beside the number.

_____ 1. Cork "cells" were first identified by

A. Schleiden.
B. Hooke.
C. Calvin.
D. Schwann.

_____ 2. The diffusion of water into a cell by osmosis results in a build-up of

A. osmotic pressure.
B. permeability.
C. turgor pressure.
D. membrane pressure.

_____ 3. The transport of dissolved substances into cells to be used by the cells is

A. synthesis.
B. secretion.
C. digestion.
D. absorption.

_____ 4. Organisms made up of cells that can operate independently but that normally tend to group together are called

A. communal.
B. composite.
C. colonial.
D. complete.

_____ 5. Which of the following is *not* a characteristic of a prokaryotic cell?

A. a plasma membrane
B. membrane-bound organelles
C. non-membrane-bound organelles
D. a nuclear area

_____ 6. The cell theory states that cells are the basic units that make up all living things, cells come from preexisting cells, and

A. cells are specialized for particular tasks.
B. cells form tissues.
C. cells are the units that carry on the functions of all living things.
D. the cell is made only by living organisms.

_____ 7. Chloroplasts contain

A. cristae.
B. grana.
C. saccules.
D. lyposomes.

_____ 8. All of the living material of a cell is called the

A. cytoplasm.
B. cytoplasmic matrix.
C. protoplasm.
D. cytology.

_____ 9. The process by which large volumes of fluid enter a cell through pouches in the cell membrane is

A. pinocytosis.
B. osmosis.
C. plasmolysis.
D. cytolysis.

_____ 10. Since diffusion is a purely physical process (it requires no cellular energy), it could be a form of

A. passive transport.
B. active transport.
C. turgor.
D. plasmolysis.

_____ 11. Several tissues grouped together and working as a unit form

A. an organ.
B. a system.
C. a cell.
D. an organism.

_____ 12. The cytoplasm's long tubular extensions that contain a set of microtubules and that are used in cellular movement are

A. kinetosomes.
B. basal bodies.
C. flagella.
D. centrioles.

_____ 13. The control center of most cell activity is the

A. nucleolus.
B. chromatin.
C. chromosome.
D. nucleus.

_____ 14. Which of the following is *not* a characteristic of a eukaryotic cell?

A. a plasma membrane.
B. some membrane-bound organelles.
C. some non-membrane-bound organelles.
D. a nuclear area not enclosed in a membrane.

_____ 15. A solution that has a greater concentration of water molecules than the cell it surrounds is

A. osmotic.
B. isotonic.
C. hypotonic.
D. hypertonic.

_____ 16. The use of cellular energy to change the permeability of a membrane is called

A. osmosis.
B. passive transport.
C. diffusion pressure.
D. active transport.

Test 3

Matching (2 pts)

Match the term with the appropriate phrase. Write the letter in the blank beside the number. No letter may be used more than once.

A. autophagy
B. cellulose
C. chloroplast
D. cytoplasm
E. endoplasmic reticulum
F. extracellular digestion
G. gap junction
H. Golgi apparatus
I. leucoplast
J. lysosome
K. mitochondria
L. phagocytosis
M. pinocytosis
N. plasmodesmata
O. ribosome

_____ 17. contained in plant cell walls

_____ 18. the substance of a cell outside the nucleus

_____ 19. folded plasma membrane inside the cell

_____ 20. center (place) of protein synthesis

_____ 21. involved in the processing of substances produced by the cell

_____ 22. contains protein-digesting enzymes

_____ 23. stores starch

_____ 24. the engulfing process by which cells take in solids by forming vacuoles

_____ 25. tiny passageways between plant cells

Short Answer 1 (2 pts)

Read each question entirely. Write your answer in the blank provided.

_____ 26. Robert Hooke called the structures he observed "cells," but what was he actually seeing?

_____ 27. How do we describe a solution in which the dissolved substances are in the same concentration as they are in the cell's cytoplasm?

_____ 28. What do we call the bursting of blood cells in hypotonic solutions?

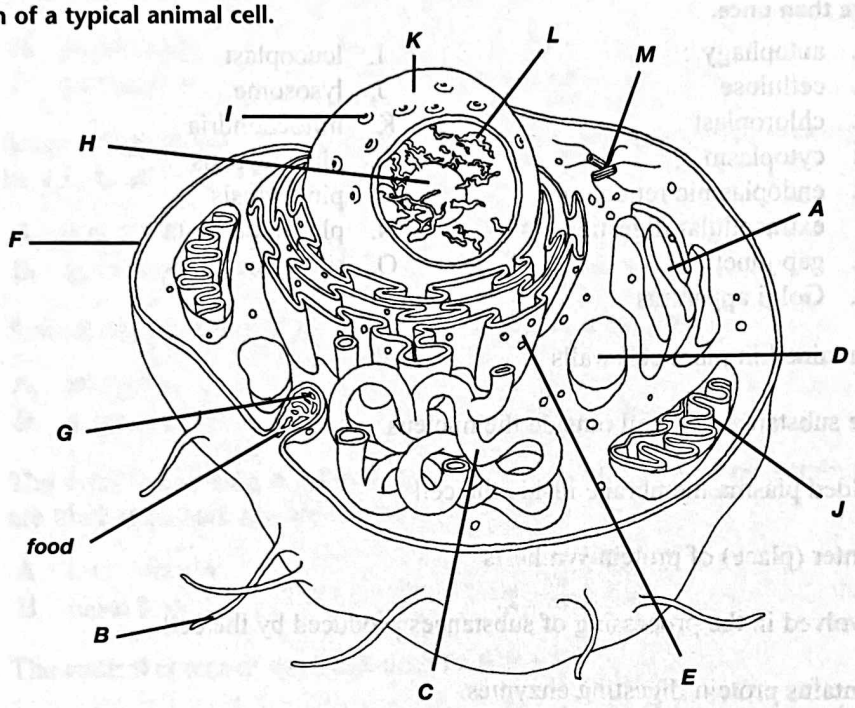
_____ 29. Much of the process of cellular respiration occurs on the cristae of the ____ .

_____ 30. What kind of solution exists when the substances dissolved outside the cell are more abundant than those in the cytoplasm?

_____ 31. The current model for explaining the structure of cell membranes is termed the ____ .

Short Answer 2 (3pts)

Read each question entirely. Write your answer in the blank provided. The following questions refer to the diagram of a typical animal cell.



_____ 32. Identify structure E.

_____ 33. Identify structure J.

_____ 34. Identify structure A.

_____ 35. Identify structure M.

_____ 36. Identify structure B.

_____ 37. Identify the process occurring at G.

_____ 38. Identify structure K (entire structure).

True/False (1 pt)

Decide whether each of the following statements is true or false. Write *True* or *False* in the blank beside each statement.

_____ 39. Cytology is the study of cells.

_____ 40. Some multicellular organisms have tissues that are grouped into organs which are arranged into systems.

_____ 41. Bacteria do not have membrane-bound nuclei.

_____ 42. In passive mediated transport, a substance is helped across a membrane against the concentration gradient.

_____ 43. Rough endoplasmic reticulum has ribosomes attached to it, whereas smooth endoplasmic reticulum does not.

_____ 44. The Golgi apparatus often processes materials the cell is secreting.

_____ 45. Turgor pressure involves a build-up of the quantity of water molecules in the contractile vacuole.

_____ (46.) The formation of pseudopodia is the result of rapid formation of microtubules.

_____ 47. The red blood cells in your body are in an isotonic solution.

_____ 48. The basal body functions to control the movement of cilia and flagella.

_____ 49. Active transport involves the cell expending energy to digest a substance it has taken in.

_____ 50. Proteins embedded in the plasma membrane will give certain characteristics to the membrane.

Long Answer (6 pts)

Choose one of the following questions. In the space provided, answer the question using complete sentences.

51. Discuss the differences between a colony and a tissue.

52. Compare the structures of prokaryotic and eukaryotic cells.

Test 3 98 A+

1 B
2 C
3 D
4 C
5 B
6 C
7 B
8 C
9 A
10 A
11 A
12 C
13 D
14 D

15 C
16 D
17 B
18 D
19 E
20 O
21 H
22 J
23 I
24 L
25 N

26 Cell Walls
27 isotonic
28 Cytolysis
29 Mitochondria
30 Hypertonic
31 fluid Mosaic model
32 Rough endoplasmic reticulum
33 Mitochondria
34 Golgi body
35 Centriole
36 Cilia
37 Phagocytosis
38 nucleus
39 True

40 True

41 true

42 false

43 true

44 true

~~45~~ true

~~46~~ true

47 true

48 true

49 false

50 true

52 Eukaryotic cells have membrane-bound organelles and their DNA inside a membrane-bound nucleus. Prokaryotic cells don't have any membrane-bound organels and their DNA just stays in a nuclear area.