Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 8- M N E Date \_\_\_\_\_\_\_\_\_

Life Science MCAS Review Quiz

\_\_\_\_\_ 1. Which of the following is a main function of the cell wall?

1. to store carbohydrates for later use
2. to give the cell a rigid structure
3. to package proteins for export
4. to carry out photosynthesis

\_\_\_\_\_ 2. A diagram of a cell is shown below.

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If the cell needs energy, which part has to function?

1. Part 1
2. Part 2
3. Part 3
4. Part 4

\_\_\_\_\_ 3. Some cells, such as human nerve and muscle cells, contain many more mitochondria than do other cells, such as skin cells. Why do some cells have more mitochondria than others?

1. The cells use more energy.
2. The cells store more nutrients.
3. The cells divide more frequently.
4. The cells breakdown proteins.

\_\_\_\_\_ 4. What is the main function of the chloroplasts in plant cells?

1. to keep the cell rigid
2. to produce glucose
3. to make the cell divide
4. to allow the plant to reproduce

\_\_\_\_\_ 5. Which of these could only be found inside a plant cell?

1. Nucleus
2. Chloroplast
3. Mitochondria
4. Cytoplasm

\_\_\_\_\_ 6. A euglena is a photosynthetic microorganism that moves by making whip-like motions with its long flagellum.

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Which of these is a response to an external stimulus?

1. motion of the flagellum
2. size of the chloroplast
3. production of glucose
4. movement toward light

\_\_\_\_ 7. Which of the following organisms has the simplest cellular structure?

1. bacterium
2. earthworm
3. mushroom
4. sunflower

\_\_\_\_\_ 8. Each of the illustrations below shows either a prokaryotic cell or a eukaryotic cell. Each cell is numbered.



Which two cells should be classified as prokaryotic cells?

1. 1 and 2
2. 1 and 3
3. 2 and 4
4. 3 and 4

\_\_\_\_\_ 9. The table below provides information about nutrition and cellular structure for organisms in different kingdoms.

|  |  |  |  |
| --- | --- | --- | --- |
| Kingdom | Nutrition | Nucleus | Unicellular orMulticellular |
| Fungi | heterotrophic | yes | unicellular andmulticellular |
| Plant | autotrophic | yes | multicellular |
| Animal | ? | ? | ? |

What information best completes the table?

1. autotrophic, no, unicellular
2. autotrophic, yes, multicellular
3. heterotrophic, no, unicellular
4. heterotrophic, yes, multicellular

\_\_\_\_\_ 10. Prokaryotes are structurally simple organisms that have existed for over two billion years. Which of the following are prokaryotes?

1. Bacteria
2. Fungi
3. Plants
4. Protists

\_\_\_\_\_ 11. Which of the following statements describes a way in which plant cells and animal cells are similar?

1. Both types of cells are prokaryotic.
2. Both types of cells are autotrophic.
3. Both types of cells have cell walls.
4. Both types of cells contain mitochondria.

\_\_\_\_\_ 12. A cell is shown in the diagram below.



Which of the following cell characteristics provides evidence that this cell comes from a plant and not from an animal?

1. A large vacuole
2. A nucleus
3. Mitochondrion
4. A cell membrane

\_\_\_\_\_ 13. A scientist discovered a new organism in some caves in Pennsylvania. The organism has the following characteristics:

* It is multicellular.
* Its cells lack cell walls.
* It has a nucleus
* It is heterotrophic.

Based on this information, to which kingdom does the organism belong?

1. Animal
2. Eubacteria
3. Fungi
4. Plants

\_\_\_\_\_ 14. Which of the following organisms is

eukaryotic, multicellular, and autotrophic?



1. C.





1. D.

\_\_\_\_\_ 15. The organisms shown below are both found in aquatic environments.



Which of the following is common to both of these organisms?

1. They contain blood
2. They contain nerves
3. They are producers of food
4. They are composed of cells

\_\_\_\_\_ 16. A unicellular organism is best described as being

1. a complex organism.
2. a microorganism.
3. an organism with specialized cells.
4. an organism with different types of tissues.

\_\_\_\_\_ 17. The diagram below shows a cell.



Where would this cell most likely be found?

1. frog
2. leaf
3. mushroom
4. yeast

Match the name of the organelle to the diagram:

\_\_\_\_\_21. nucleus

\_\_\_\_\_ 22. chloroplast

\_\_\_\_\_ 23. vacuole

\_\_\_\_\_ 24. cell wall

\_\_\_\_\_ 25. mitochondria



\_\_\_\_\_ 18. Which of these is an organism that is unicellular?

1. amoeba
2. mushroom
3. ant
4. seaweed

\_\_\_\_\_ 19. Which of these must be absorbed by animal cells in order to grow?

1. genes
2. sunlight
3. nutrients
4. chromosomes

\_\_\_\_\_ 20. If a new organism were discovered, which of the following would most likely be used to classify it into the appropriate kingdom?

 A. the color of the organism

 B. the organism’s natural habitat

 C. the structure of the organism’s

anatomy

D. the location where the organism

was found