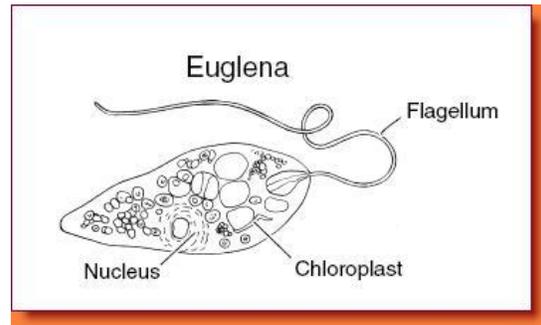


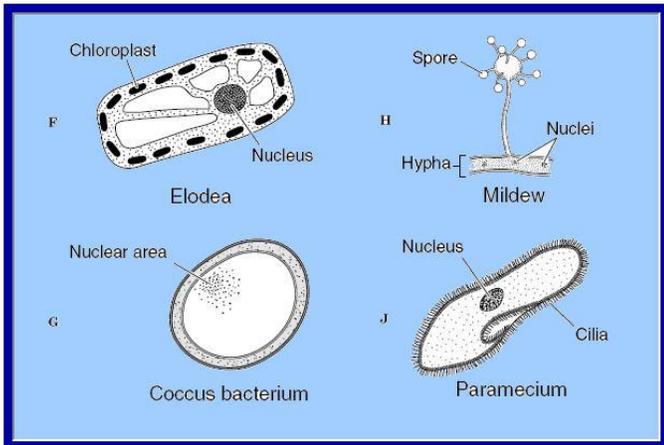
Name \_\_\_\_\_ Date \_\_\_\_\_

BIO SOL Review 5 - Cells (32)

- (2006-24) Which of these organisms contains no specialized cells?
  - Sea anemone
  - Jellyfish
  - Paramecium**
  - Sponge
- (2006-35) The main difference between prokaryotic and eukaryotic cells is that —
  - eukaryotic cells have a smaller cell nucleus
  - prokaryotic cells are always much larger
  - prokaryotic cells do not have a plasma membrane
  - eukaryotic cells have a more advanced cellular organization**
- (2006-38) What characteristic do all living things share?
  - They reproduce by mitosis.
  - They are made up of many parts.
  - They contain DNA.**
  - They need oxygen to survive.



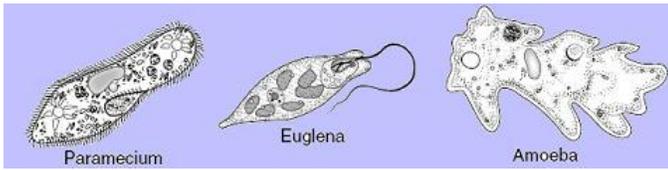
- (2002-38) What is the purpose of the flagellum?
  - Movement**
  - Catching prey
  - Circulation
  - Attachment
- (2005-43) Which of these is most responsible for carrying coded information from the nucleus?
  - The cell membrane
  - ATP
  - mRNA**
  - The ribosomes



- (2001-44) Which of these is capable of moving quickly in response to its environment?
  - F
  - G
  - H
  - J**
- (2005-5) Which of these is responsible for the "rough" appearance of endoplasmic reticulum?
  - Enzymes
  - DNA
  - Lysosomes
  - Ribosomes**
- (2004-18) All of these are common shapes of bacteria EXCEPT —
  - rod
  - spiral
  - square**
  - spherical

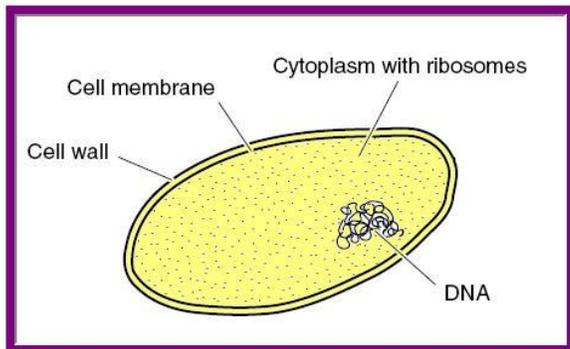
Kingdom	Metabolism	Control	Covering	Food Production
Fungi	mitochondria	nucleus	cell wall	none
Animalia	mitochondria	nucleus	cell membrane	none
Plantae	mitochondria	nucleus	cell wall	chloroplasts
Protista	mitochondria	nucleus	cell membrane	some with chloroplasts
Monera	ribosomes	DNA strand	cell wall	none

- (2001-17) Which of these statements is supported by the data shown in the table?
  - Eukaryotic cells vary in covering and in food production.**
  - Each of the kingdoms has different organelles for metabolism.
  - All cells have nuclei for control of cell functions.
  - Most kingdoms are made up of prokaryotic cells.
- (2003-20) What structure is common to all five kingdoms of living organisms?
  - Cell wall
  - DNA**
  - Nucleus
  - Mitochondria
- (2001-50) Which of these functions most like the "brain" of a cell?
  - The Golgi apparatus
  - The mitochondrion
  - The nucleus**
  - The smooth endoplasmic reticulum



12. (2004-45) The one-celled eukaryotic organisms above are often found in freshwater ponds. What is one characteristic they all have in common?

- a. **Nucleus**
- b. Pseudopodia
- c. Cilia
- d. Flagellum



13. (2002-19) How is the prokaryotic bacterium in the diagram different from a eukaryotic cell?

- a. It stores its genetic information in DNA.
- b. It has ribosomes to make proteins.
- c. It has a cell membrane.
- d. **It has no membrane-bound nucleus.**

14. (2001-19) Tall land plants have requirements different from those of aquatic plants. Which of these must the tall land plants have that aquatic plants do not need?

- a. A means of reproduction
- b. **Thick-celled walls**
- c. Photosynthetic abilities
- d. Organelles for respiration

15. (2001-49) Which of these statements best summarizes the cell theory?

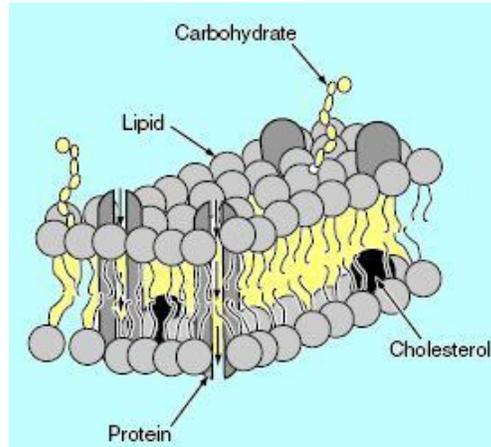
- a. Cells contain a nucleus and other parts.
- b. Cells come in different shapes and sizes.
- c. Cells can be seen through a microscope.
- d. **Cells are the building blocks of living things.**

16. (2006-37) Cells from which of the following organisms would be expected to contain cell walls?

- a. Sponge
- b. **Water lily**
- c. Cricket
- d. Paramecium

17. (2006-5) Which pair of structures best shows that plant cells have functions different from animal cells?

- a. **Chloroplasts and cell walls**
- b. Cytoplasm and mitochondria
- c. Ribosomes and cell membranes
- d. Nuclei and centrioles



18. (2003-35) In the cell membrane model shown above, the molecules which move large molecules into and out of the cell are known as

- a. cholesterol
- b. **proteins**
- c. lipids
- d. carbohydrates

**“I took a good clear piece of Cork and with a Pen-Knife sharpen’d as keen as a razor . . . cut off . . . an exceeding thin piece of it. For upon examination with my Microscope, I could exceedingly plainly perceive it to be all perforated and porous . . . These pores, or cells, were not very deep, but consisted of a great many little Boxes.”**

19. (2002-15) These words were written by Robert Hooke in 1665. The pores or cells that Hooke described were really —

- a. mitochondria
- b. nuclei
- c. **cell walls**
- d. cell membranes

20. (2006-13) When an animal eats, food stays in the stomach for a period of time. When a unicellular organism, such as Paramecium, takes in food, the food is contained in which organelle?

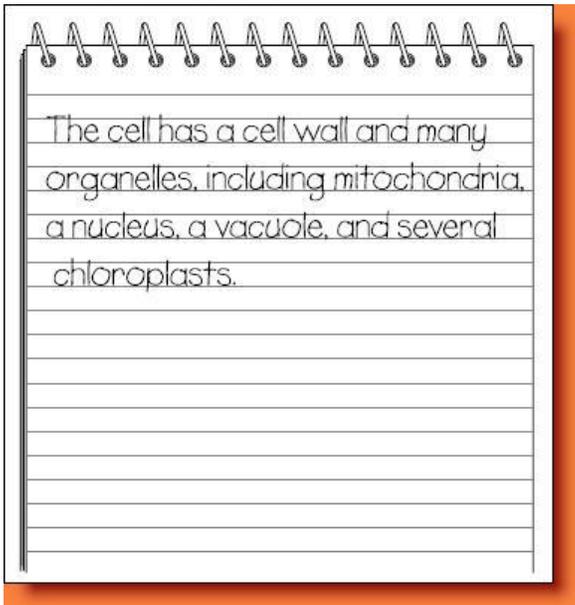
- a. Chloroplast
- b. Mitochondrion
- c. **Vacuole**
- d. Nucleus

21. (2001-11) In the human body, the circulatory system transports and delivers substances. Within the cell, which organelle performs a similar function?

- a. Nucleus
- b. **Endoplasmic reticulum**
- c. Golgi apparatus
- d. Mitochondrion

22. (2003-33) Which of the following organelles is present in both prokaryotes and eukaryotes?
- Endoplasmic reticulum
  - Ribosome**
  - Golgi body
  - Nucleus

23. (2003-22) Compared to a skin cell, a muscle cell is likely to have more —
- golgi bodies
  - chloroplasts
  - cell membranes
  - mitochondria**



24. (2001-4) A student wrote this description of a cell after looking at it under a microscope. Which type of cell was the student most likely describing?
- Bacterium cell
  - Fungus cell
  - Animal cell
  - Plant cell**

25. (2005-38) Amino acids link together by peptide bonds to form proteins. In which cellular organelle would this process occur?
- Mitochondrion
  - Ribosome**
  - Lysosome
  - Golgi body

26. (2004-3) Which characteristic of prokaryotic organisms makes them different from eukaryotes?
- Prokaryotes are made of cells.
  - Prokaryotes do not have chromosomes.
  - Prokaryotes have DNA.
  - Prokaryotic cells do not have membrane-bound organelles.**

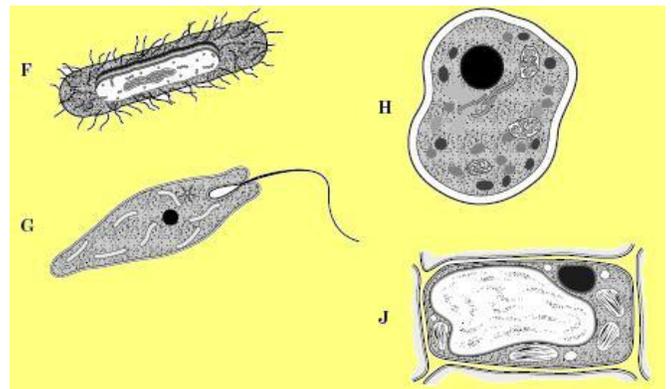
27. (2004-5) A bacterium will construct different proteins to metabolize the sugars lactose or glucose, depending on which one it detects in the outside environment. What part of the bacterium allows it to recognize different substances in the outside environment?
- Nucleus

- Lysosomes
- Cell membrane**
- Endoplasmic reticulum

### Experimental Observations

- Nucleus is present.
- Cell wall is present.
- Chloroplasts and mitochondria are both present.

28. (2003-47) The eukaryotic organism described above should be classified as —
- an animal
  - a plant**
  - a bacterium
  - a fungus
29. (2003-30) A cell with numerous ribosomes is probably specialized for -
- cell division
  - energy production
  - protein synthesis**
  - enzyme storage



30. (2005-28) Which of these is the best model of a prokaryotic cell?
- F**
  - G
  - H
  - J
31. (2005-26) What repackages proteins into forms the cell can use, expel, or keep stored?
- Centrioles
  - Golgi bodies**
  - Lysosomes
  - Mitochondria
32. (2005-22) Some unicellular organisms are motile (have the ability to move) and some are nonmotile. Which cellular structures are associated with movement?
- Chloroplasts
  - Ribosomes
  - Vacuoles
  - Flagella**