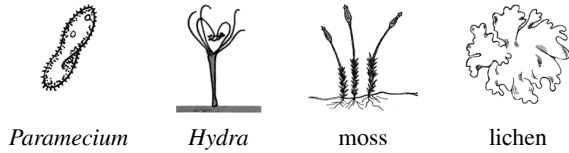


Immune System and Microorganisms Practice

Name: _____

Date: _____

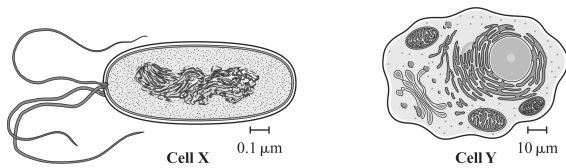
1. Use the pictures below to answer the following question.



Which of the following is an example of a single-celled organism?

- A. *Paramecium* B. *Hydra*
 C. moss D. lichen

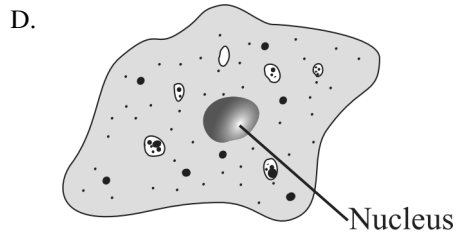
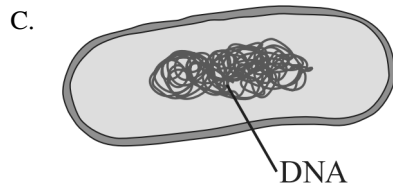
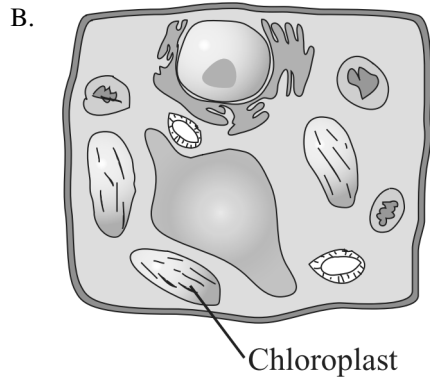
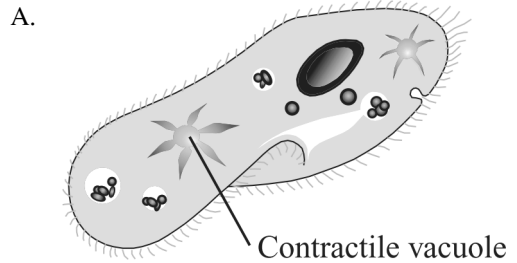
2. The illustrations below represent two different cells.



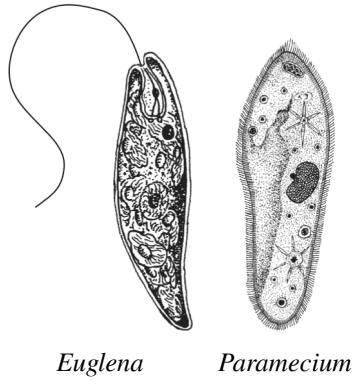
Which of the following statements *best* identifies these two cells?

- A. Cell X is a prokaryotic cell and cell Y is a eukaryotic cell.
 B. Cell X is an archae cell and cell Y is a eubacterial cell.
 C. Cell X is a red blood cell and cell Y is a muscle cell.
 D. Cell X is a plant cell and cell Y is an animal cell.

3. Scientists believe that the first organisms that appeared on Earth were prokaryotic. Which of the following *best* represents what the cell structure of these organisms may have looked like?



4. The illustration below represents two protists.



Euglena *Paramecium*

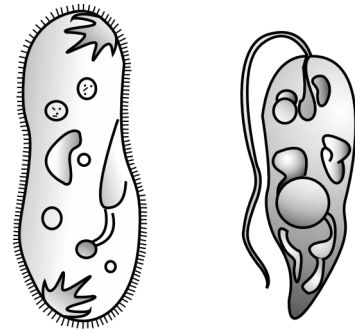
What do these two organisms have in common?

- A. They are unicellular.
- B. They cause diseases.
- C. They live underground.
- D. They are photosynthetic.

5. Which of the following organisms is a prokaryote?

- A. *Agaricus arvensis*, horse mushroom
- B. *Rhizopus stolonifer*, bread mold fungus
- C. *Saccharomyces cerevisiae*, baker's yeast
- D. *Thiopedia rosea*, purple sulfur bacterium

6. Refer to the diagram below of the single-celled, eukaryotic organisms to answer the following question(s).



Paramecium *Euglena*

Euglena uses which of these to move?

- A. cilia
- B. a vacuole
- C. a flagellum
- D. pseudopodia

7. Which organism has only one cell?

A.



Grasshopper

B.



Paramecium

C.



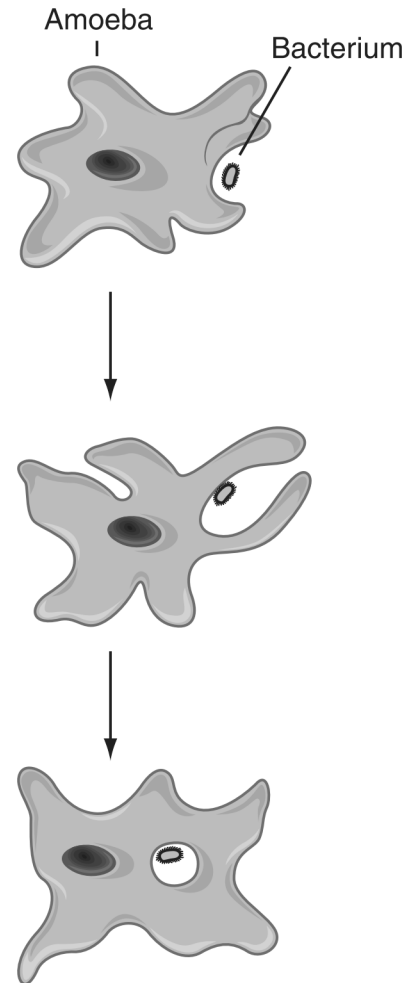
Mushroom

D.



Tree

8. The diagram below shows an amoeba performing a function necessary for life.



Which function is shown in the diagram?

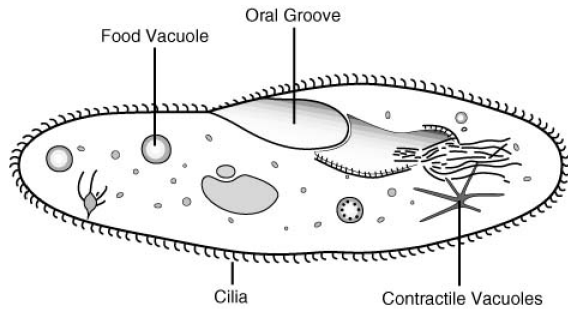
A. collecting food

B. excreting wastes

C. making food

D. destroying wastes

9.



Which organelle below reduces the effects of osmosis in this type of protozoan?

- A. Contractile vacuole
- B. Food vacuole
- C. Cilia
- D. Oral Groove

10. Which these organisms will *most likely* show a positive phototactic response?

- A.

A diagram of a euglena, a spindle-shaped organism with a long flagellum at one end. It contains a large, central nucleus and several chloroplasts.
- B.

A diagram of an amoeba, an irregularly shaped organism with multiple pseudopodia extending from its body. It has a large, central nucleus.
- C.

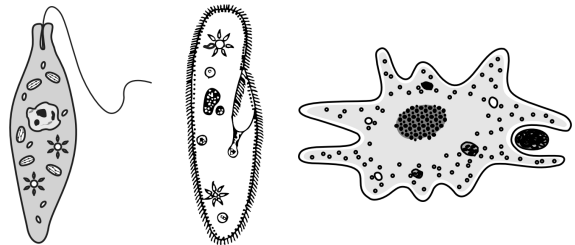
A diagram of a paramecium, similar to the one in question 9, showing its internal structure including a contractile vacuole and cilia.
- D.

A diagram of a plant cell, showing a thick cell wall and a large, central nucleus.

11. Why can single-celled organisms survive without the help of other kinds of cells?

- A. They can carry out all the cell functions necessary for life.
- B. They produce special substances to avoid predators.
- C. They reproduce at slower rates than other types of cells.

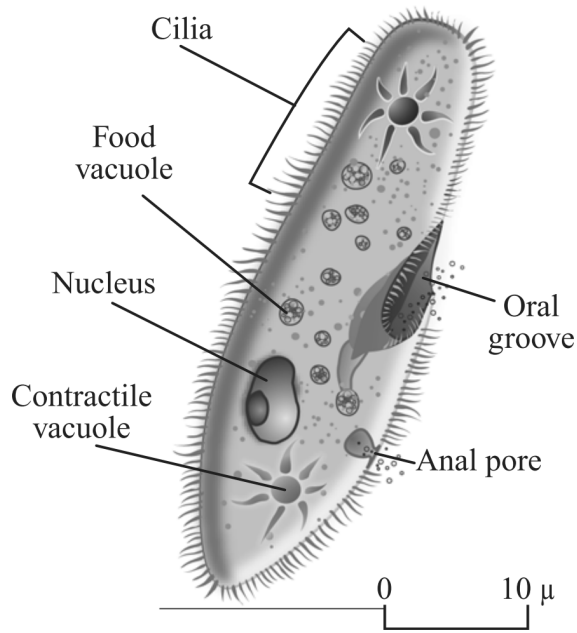
12. The illustrations below are of a euglena, a paramecium, and an amoeba.



How do these organisms compare?

- A. They use different structures for movement.
- B. They use different structures to control cell activity.
- C. They all make their own food by photosynthesis.
- D. They all have eyespots to sense sunlight.

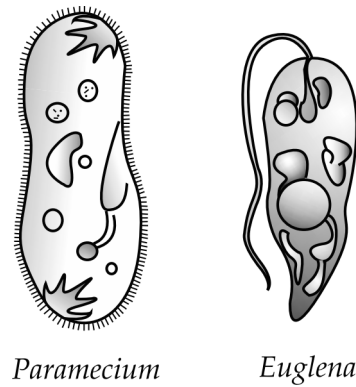
13. The picture below shows a paramecium.



In which kingdom is the paramecium classified?

- A. Animalia
- B. Fungi
- C. Plantae
- D. Protista

14. Refer to the diagram below of the single-celled, eukaryotic organisms to answer the following question(s).



Euglena and *Paramecium* are eukaryotes because they both

- A. have a nucleus
- B. have ribosomes
- C. reproduce by sexual reproduction
- D. reproduce by asexual reproduction

15. *All* individuals are microscopic in the kingdom—

- A. Animalia.
- B. Fungi.
- C. Archaeobacteria.
- D. Plantae.

16. A scientist discovers a group of unicellular organisms whose cell walls lack peptidoglycan. These organisms thrive in temperatures above 80°C and may be found in sulfur-rich hot springs.

In which kingdom is this species classified?

- A. Archaeobacteria B. Eubacteria
C. Fungi D. Protist

17. What is the *greatest* danger to a patient who has had damage to the skin?

- A. loss of oils produced by the skin
B. excessive muscle contractions in the damaged area
C. infections in uncovered tissues
D. damaged tissue entering the blood stream

18. Sweat and skin secretions contain a mixture of molecules that kills or limits the growth of many types of microbes. This control of microbes is an example of

- A. a nonspecific defense against infection.
B. an enzyme-catalyzed biochemical reaction.
C. a feedback loop to maintain homeostasis.
D. a specific immune response to infection by microbes.

19. In the human body, which system functions *primarily* to defend the body against disease?

- A. digestive B. immune
C. nervous D. respiratory

20. Malaria is a disease caused by a microscopic parasite that attacks blood cells. The parasite is spread to humans through the bite of a mosquito. Malaria causes headaches, muscle pain, coughing, fever, and vomiting.

Why is malaria able to cause symptoms in so many parts of the body?

- A. Mosquitoes that carry the parasite can bite the skin on all parts of the body.
B. The parasite enters the circulatory system, where it can travel to different parts of the body.
C. The parasite attaches itself to nerves, controlling the messages sent to different parts of the body.
D. Mosquitoes inject the parasites into skin, where they are able to move to different parts of the body.

21. A certain virus causes people to catch colds and other infections more easily.

Which body system does the virus affect?

- A. Circulatory B. Digestive
C. Immune D. Nervous

22. Research has led scientists to conclude that fevers help the human body fight infection by elevating body temperatures and causing parts of the immune system to work better.

Which statement does this conclusion *best* support?

- A. Fevers are a disruption of homeostasis.
- B. Fevers should immediately be treated with medication.
- C. Fevers are a necessary part of maintaining homeostasis.
- D. Fevers are rarely caused by bacterial infections.

23. Which of the following is an example of an antigen that might be recognized by the immune system of an individual?

- A. a viral protein
- B. a fat molecule
- C. saline solution
- D. oxygen molecule

24. The purpose for giving a person a vaccine is to

- A. introduce chemicals that destroy viruses.
- B. stimulate an immune response.
- C. prevent inflammation.
- D. cure a disease.

25. The Sabin vaccine is a liquid containing weakened polio viruses. Vaccinated individuals become protected against polio because the weakened viruses

- A. prevent further viral invasion.
- B. induce an inflammatory response.
- C. promote production of antibodies.
- D. are too weak to cause illness.

26. Which of the following require a host cell because they are *not* able to make proteins on their own?

- A. blue-green algae
- B. bacteria
- C. protozoans
- D. viruses

27. How do human diseases caused by bacteria and diseases caused by viruses react to antibiotics?

- A. Neither responds to antibiotics.
- B. Both respond to antibiotics.
- C. Viral diseases respond to antibiotics; bacterial diseases do not.
- D. Bacterial diseases respond to antibiotics; viral diseases do not.

28. The common cold is caused by a virus that enters the human body and causes mild, flu-like symptoms. Some people believe that the common cold can be treated by digesting the herb Echinacea. The following table shows results from a study conducted to explore the effects of Echinacea on children with colds.

Echinacea Study

Type of Treatment	A Pill Containing Echinacea	Same Type of Pill Without Echinacea
Number of children taking pills	337	370
Average length of cold infection (days)	10	10
Children having more than one cold during the study	52%	64%
Children developing a skin rash	7.1%	2.7%

It is very difficult to develop a vaccine against the common cold. The reason for this is that the common cold virus _____.

- A. hides in the digestive system
- B. changes rapidly due to high mutation rates.
- C. includes RNA as its genetic materials
- D. is too small for the immune system to detect

29. Which of these *best* defines communicable diseases?

- A. They can be cured.
- B. They are caused by bacteria.
- C. They are spread to others.
- D. They can spread only in winter.

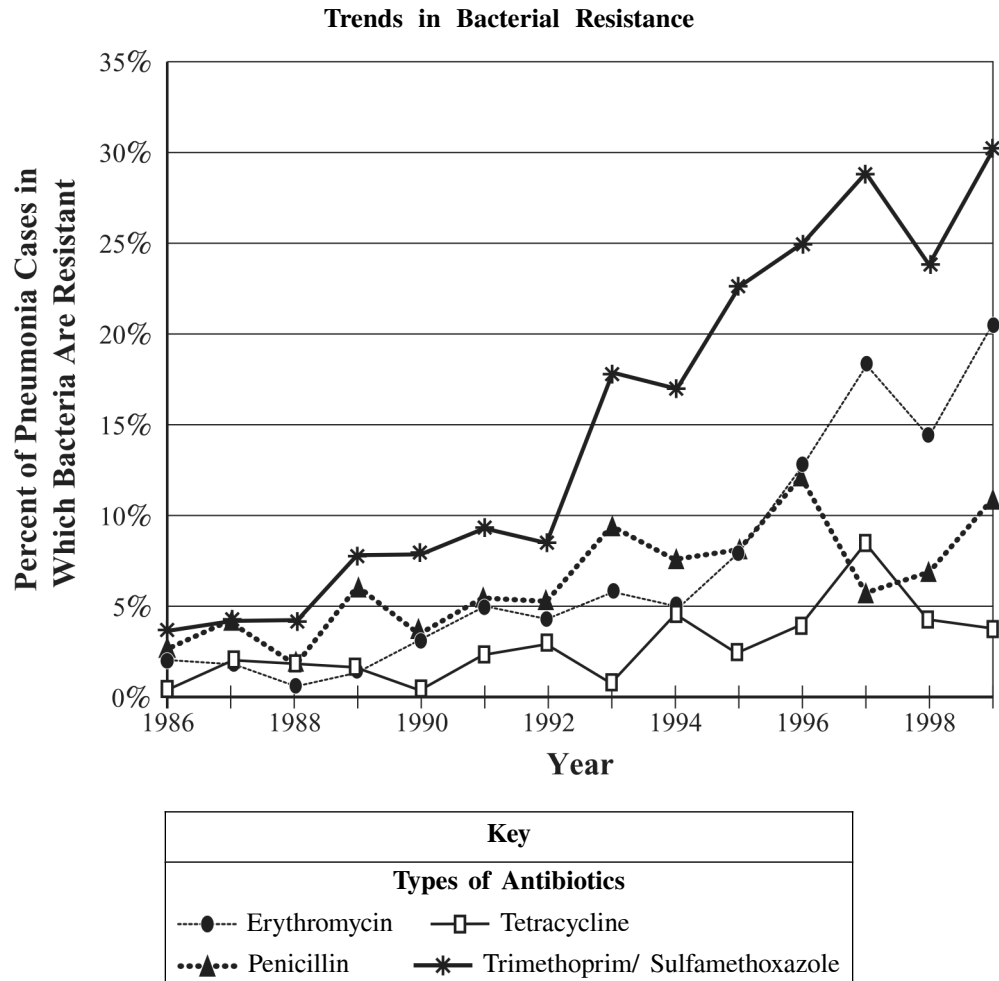
30. Some antibiotics destroy disease-causing bacteria by entering the bacterial cells and interfering with the critical life processes that keep them alive. However, antibiotics are not able to destroy viral infections because

- A. the wall surrounding a virus cannot be penetrated by antibiotic chemicals.
- B. viruses are not cells, so they do not perform the processes that antibiotics normally disrupt.
- C. viruses are constantly moving, so antibiotics cannot reach them.
- D. antibiotics are destroyed by the protein coating that surrounds the viral DNA.

The following section focuses on bacterial resistance to several antibiotics.

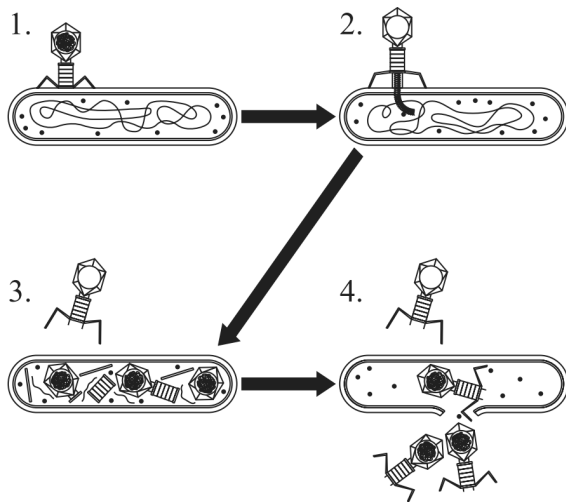
One of the most important developments in modern medicine was the discovery of antibiotics. Antibiotics are used to treat infections caused by bacteria. However, strains of bacteria that are resistant to antibiotics are emerging. The rate of increase in infections caused by these antibiotic-resistant strains of bacteria is a concern for human health.

The bacterium *Streptococcus pneumoniae* is a major cause of the respiratory disease pneumonia. The graph below shows trends in bacterial resistance to different antibiotics in pneumonia cases from 1986 to 1999.



31. Antibiotics are helpful in treating an infection when the number of bacteria becomes too large for the body's immune system to fight on its own. What process enables the bacteria to multiply inside the body?
- A. binary fission B. fertilization
C. meiosis D. nitrogen fixation

32. A process is illustrated in the diagram below.



Which process is illustrated in the diagram?

- A. bacterial conjugation
B. facilitated diffusion
C. gamete formation
D. viral reproduction

33. In 1992, scientists announced that they may have found a vaccine that protects monkeys against a certain disease. Several monkeys vaccinated in 1990 and then exposed to the virus have not acquired the disease after two years. What conclusion about the vaccine is *most* appropriate?

- A. The vaccine is reliable because the scientists have not become infected.
B. The vaccine is reliable based on current information.
C. The vaccine is not reliable because not enough time has passed to be sure.
D. The vaccine should be put on the market before any monkeys die.

Immune System and Microorganisms Practice 05/04/2015

- | | | | |
|---------|---|---------|---|
| 1. | | 21. | |
| Answer: | A | Answer: | C |
| 2. | | 22. | |
| Answer: | A | Answer: | C |
| 3. | | 23. | |
| Answer: | C | Answer: | A |
| 4. | | 24. | |
| Answer: | A | Answer: | B |
| 5. | | 25. | |
| Answer: | D | Answer: | C |
| 6. | | 26. | |
| Answer: | C | Answer: | D |
| 7. | | 27. | |
| Answer: | B | Answer: | D |
| 8. | | 28. | |
| Answer: | A | Answer: | B |
| 9. | | 29. | |
| Answer: | A | Answer: | C |
| 10. | | 30. | |
| Answer: | A | Answer: | B |
| 11. | | 31. | |
| Answer: | A | Answer: | A |
| 12. | | 32. | |
| Answer: | A | Answer: | D |
| 13. | | 33. | |
| Answer: | D | Answer: | B |
| 14. | | | |
| Answer: | A | | |
| 15. | | | |
| Answer: | C | | |
| 16. | | | |
| Answer: | A | | |
| 17. | | | |
| Answer: | C | | |
| 18. | | | |
| Answer: | A | | |
| 19. | | | |
| Answer: | B | | |
| 20. | | | |
| Answer: | B | | |