Life Science CH 8 study guide

Multiple Choice

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

____ 1. Why are viruses like parasites?
a. They destroy the cells they enter. b. They multiply. c. They use energy to develop. d. They make their own food.

____ 2. A virus needs energy to
a. make food. b. grow and develop. c. make cells. d. multiply.

____ 3. The genetic material of a virus is found in its
a. coat. b. core. c. coat and core. d. nucleus.

____ 4. A virus's proteins are important because they
a. contain the genetic material. b. make new virus particles. c. provide energy for the virus. d. help the virus attach to its host.

____ 5. Which of the following statements does NOT describe an active virus?
a. It attaches to the host cell. b. It takes over the host cell's functions. c. It becomes part of the host cell's genetic material. d. It destroys the host cell.

____ 6. What ability of viruses makes them useful in gene therapy?
a. their ability to enter cells b. their ability to remain inactive for a long time c. their ability to multiply in cells d. their ability to take over the functions of host cells

____ 7. Which shape describes some bacterial cells?
a. threadlike b. bulletlike c. rodlike d. bricklike

____ 8. Which of the following is found in the cytoplasm of bacterial cells?
a. cell membrane b. nucleus c. genetic material d. flagella

____ 9. What process results in genetically different bacteria?
a. binary fission b. respiration c. conjugation d. asexual reproduction

____ 10. Endospores form during
a. binary fission. b. sunlight hours. c. respiration. d. harsh environmental conditions.

____ 11. What important role do bacteria called decomposers play?
a. They return basic chemicals to the environment. b. They slow down food spoilage. c. They kill harmful bacteria. d. They produce vitamins.

____ 12. Which of the following is NOT a role of bacteria that live in human bodies?
a. digesting food b. preventing disease-causing bacteria from attaching to your intestines c. making vitamins d. preventing diabetes

____ 13. Which of the following is an example of indirect contact that spreads some infectious diseases?
a. touching and hugging b. animal bites c. eating contaminated food d. inhaling infected drops of moisture

____ 14. Which infectious disease is NOT transmitted by an animal bite?
a. encephalitis b. rabies c. botulism d. Lyme disease

____ 15. The best treatment for most viral infections is
a. an over-the-counter medication. b. a vaccine. c. an antibiotic. d. bed rest.

____ 16. How does a vaccine work?
a. It activates the body's natural defenses. b. It weakens the cell walls of bacteria causing the cells to burst. c. It treats the symptoms of an infection. d. It attacks antibiotic-resistant bacteria.

____ 17. What is a characteristic of archaebacteria?
a. Most are disease-causing. b. They live just about everywhere. c. They use sun to produce food and energy. d. They thrive in extreme environments.

____ 18. Binary fission is the bacterial process of
a. asexual reproduction. b. obtaining food. c. producing energy. d. forming endospores.

____ 19. Viruses are considered to be nonliving because they
a. cannot multiply. b. are not cells. c. produce wastes. d. use energy to grow.

____ 20. The process of breaking down food to release its energy is called
a. conjugation b. respiration. c. binary fission. d. nutrition.

____ 21. Heterotrophic bacteria obtain food by
a. capturing the sun's energy. b. using the energy from chemicals in their environment. c. consuming autotrophs and other heterotrophs. d. helping autotrophs make food.

____ 22. Which virus is named for the organism that it infects?
a. Ebola virus b. small pox virus c. bacteriophage d. Epstein-Barr virus

____ 23. What provides energy for a virus?
a. food b. its host c. the sun d. a parasite

____ 24. Which phrase describes the size of virus particles?
a. smaller than cells b. slightly larger than cells c. the same size as cells d. much larger than cells

____ 25. Which statement about a virus's coat is NOT true?
a. It protects the virus. b. It contains protein. c. It contains genetic material. d. It helps the virus attach to its host.

____ 26. A hidden virus
a. cannot attach to a host cell. b. becomes part of the host cell's genetic material. c. immediately takes over the cell's function. d. attaches to but does not enter the cell.

____ 27. Which of the following structures are always found in bacterial cells?
a. nuclei b. ribosomes c. flagella d. coats

____ 28. The term "antibiotic resistant" refers to bacteria that
a. are resistant to a vaccine. b. survive in the presence of an antibiotic. c. are weakened and destroyed by antibiotics. d. are dead or altered.

____ 29. Which disease can be contracted by inhaling infected droplets?
a. tetanus b. rabies c. chicken pox d. AIDS

____ 30. Bacteria are classified in two kingdoms based on their
a. cell structure. b. chemical differences. c. whether they are useful or harmful. d. how they reproduce.

Modified True/False

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

____ 31. Viruses are considered to be nonliving because they are not made of <u>protein</u>.

____ 32. The inner core of a virus contains <u>genetic material</u>.

____ 33. When a virus invades a living cell, its <u>outer coat</u> takes over the cell's functions.

____ 34. Unlike the cells of other organisms, the cells of bacteria do not have <u>nuclei</u>.

____ 35. The <u>cell membrane</u> is the outermost structure of most bacterial cells.

____ 36. Bacteria that are <u>decomposers</u> break down large chemicals in dead organisms into small chemicals.

____ 37. Scientists think that today's <u>eubacteria</u> closely resemble Earth's first life forms.

____ 38. <u>Binary fission</u> occurs when a bacterium transfers some of its genetic material to another bacterium.

____ 39. The bacteria that cause Lyme disease are transmitted through <u>tick bites</u>.

____ 40. <u>Vaccines</u> such as penicillin are chemicals that can kill bacteria.

Completion

Complete each statement.

41. A virus can multiply only when it is inside a(n) _____.

42. Although viruses are nonliving they act like _____ because they destroy the cells in which they multiply.

43. A virus's _____ contains the instructions for making new viruses.

44. The shape of the _____ in a virus's coat allows the virus to attach to certain cells.

45. A virus that begins to multiply immediately after it enters a cell is called a(n) _____ virus.

46. When a(n) _____ virus enters a cell, the virus's genetic material becomes part of the cell's genetic material.

47. Some bacteria move by using a long, whiplike structure called a(n) _____.

48. Bacteria are called _____ because their genetic material is not contained in nuclei.

49. Bacterial cells contain structures called _____, which are chemical factories where proteins are produced.

50. Many bacteria are called _____ because they break down large chemicals in dead organisms into small chemicals.

51. Bacteria in swellings on the roots of peanut plants convert _____ gas from the air into compounds the plants need to grow.

52. Many bacteria in the _____ kingdom live in extreme environments, such as hot springs.

53. When bacteria reproduce by _____, one cell divides to form two identical cells.

54. During a process called _____, one bacterium divides to form two identical bacteria.

55. Illnesses that pass from one organism to another are called _____.

56. Infectious diseases are spread by contact with contaminated people and objects, with animals, and with _____.

57. Some bacteria cause diseases by producing poisons known as _____.

58. A _____ is a substance that stimulates the body to produce chemicals that destroy viruses or bacteria.

59. The ability to _____ is the only characteristic that viruses share with living organisms.

60. Bacteria that survive in the presence of an antibiotic are said to be _____ to the antibiotic.