

Name _____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

- 1) The mutations that improve the survival and reproduction of organisms, and thus contribute to the evolution of species, arise rapidly in prokaryotes due to their _____
A) cell wall composition.
B) absence of a nucleus.
C) rapid rates of cell division.
D) anaerobic metabolism.
E) sexual reproduction.
- 2) Assume that a genetic analysis of a sick animal's DNA indicates that part of one chromosome does not belong to the animal. It is foreign DNA, and is not similar to any of the animal's normal genes. Where did it most likely come from? _____
A) a bacterial infection
B) an Archaea infection
C) a fungal infection
D) a viral infection
E) a prion infection
- 3) Antibiotics can only be effective against a _____
A) virus. B) viroid. C) prion. D) bacterium.
- 4) Binary fission is the method by which bacteria _____
A) move to new locations.
B) survive extreme conditions for long periods of time.
C) metabolize without oxygen.
D) reproduce.
E) acquire genetic variation.
- 5) Prokaryotes are helpful to humans because they _____
A) help plants utilize atmospheric nitrogen.
B) are used to make various foods.
C) synthesize essential vitamins within our intestinal tracts.
D) can clean up toxic waste.
E) all of the above
- 6) AIDS is caused by _____
A) fungi. B) viroids. C) prions. D) viruses. E) bacteria.
- 7) Herpes is caused by _____
A) fungi. B) viroids. C) viruses. D) bacteria. E) prions.

- 8) Some prokaryotes can live in harsh environments such as 8) _____
A) boiling water.
B) a mile below Earth's surface.
C) extremely acidic or alkaline conditions.
D) Antarctic sea ice.
E) all of the above
- 9) Which of the following cells is within the size range of a typical prokaryote? 9) _____
A) a cell 700 micrometers long
B) a cell 2 micrometers in diameter
C) a cell 100 micrometers in diameter
D) a cell 25 micrometers in diameter
E) a cell the size of the period at the end of this sentence
- 10) Which is the correct sequence of viral replication? 10) _____
A) penetration → genetic material replication → transcription → assembly → protein synthesis
B) genetic material replication → penetration → transcription → assembly → protein synthesis
C) penetration → genetic material replication → transcription → protein synthesis → assembly
D) transcription → penetration → genetic material replication → assembly → protein synthesis
E) penetration → transcription → assembly → genetic material replication → protein synthesis
- 11) Sex pili are prokaryotic structures that are used 11) _____
A) during conjugation.
B) for movement.
C) during binary fission.
D) for adhering to surfaces.
E) all of these
- 12) A virus basically consists of 12) _____
A) RNA or DNA and a membrane.
B) proteins and a cell membrane.
C) enzymes and a protein coat.
D) RNA or DNA and a protein coat.
E) RNA or DNA and enzymes.
- 13) Peptidoglycan is found in the cell walls of 13) _____
A) Bacteria. B) Archaea. C) fungi. D) plants. E) viruses.
- 14) Which of the following is FALSE? 14) _____
A) The genetic material of viruses is not contained in a nucleus.
B) Viruses are classified in the domain Archaea.
C) Antibiotics cannot prevent or treat viral diseases.
D) Viruses are smaller than bacteria.
E) Viruses are not living organisms.
- 15) In which of these environments would you normally find prokaryotes? 15) _____
A) an animal's intestinal tract
B) human skin
C) a single drop of seawater
D) a spoonful of soil
E) all of the above

- 16) In bacteria, the small, circular pieces of DNA that are located outside the chromosome are called 16) _____
A) plasmids.
B) endospores.
C) bacteriophages.
D) flagella.
E) sex pili.
- 17) Which virus attacks white blood cells? 17) _____
A) herpes B) influenza C) HIV D) smallpox E) rabies
- 18) Which of these is NOT alive? 18) _____
A) a bacterium
B) a cyanobacterium
C) a virus
D) a plant
E) a protist
- 19) Mobile prokaryotes can move around with the help of 19) _____
A) flagella.
B) plasmids.
C) sex pili.
D) peptidoglycan.
E) endospores.
- 20) Viruses that attack prokaryotes are called 20) _____
A) host cells.
B) viroids.
C) bacteriophages.
D) prions.
E) all of the above