Chapter 01- Microbiology – The Science

1. Which of the following individuals is considered to be the “Father of Microbiology”?
   A) Anton van Leeuwenhoek
   B) Louis Pasteur
   C) Robert Koch
   D) Rudolf Virchow

2. The microorganisms that usually live on or within a person are collectively referred to as
   A) germs.
   B) indigenous microflora.
   C) nonpathogens.
   D) opportunistic pathogens.

3. Microorganisms that live on dead and decaying organic material are known as
4. The study of algae is called
A) algaeology.
B) botany.
C) mycology.
D) phycology.

5. The field of parasitology involves the study of which of the following types of organisms?
A) arthropods, bacteria, fungi, protozoa, and viruses
B) arthropods, helminths, and certain protozoa
C) bacteria, fungi, and protozoa
D) bacteria, fungi, and viruses

6. Rudolf Virchow is given credit for proposing which of the following theories?
A) abiogenesis
B) biogenesis
C) germ theory of disease
D) spontaneous generation

7. Which of the following microorganisms are considered obligate intracellular pathogens?
A) chlamydia, rickettsias, Mycobacterium lepra, and Treponema pallidum
B) Mycobacterium lepra and Treponema pallidum
C) Mycobacterium tuberculosis and viruses
D) rickettsias, chlamydias, and viruses

8. Which one of the following statements is true?
A) Koch developed a rabies vaccine.
B) Microorganisms are ubiquitous.
C) Most microorganisms are harmful to humans.
D) Pasteur conducted experiments that proved the theory of abiogenesis.

9. Which of the following are even smaller than viruses?
A) chlamydias
B) prions and viroids
C) rickettsias
D) cyanobacteria

10. Which of the following individuals introduced the terms “aerobes” and “anaerobes”?
A) Anton van Leeuwenhoek
B) Louis Pasteur
C) Robert Koch
D) Rudolf Virchow

Use the following to answer questions 11-15:
Match the following names with the correct phrases.
a. Anton van Leeuwenhoek b. Robert Koch
c. Louis Pasteur
d. Rudolf Virchow
e. Alexandre Emil Jean Yersin

11. Developed vaccines for anthrax and rabies.
12. Proposed the theory of biogenesis.
13. Discovered the etiologic agent of plague.
14. The first person to observe live bacteria and protozoa.
15. Developed an experimental procedure that could be used to prove that a specific microorganism of a specific infectious disease.

Use the following to answer questions 16-20:

Match the following items with the correct statements.

a. pathogens
b. nonpathogens
c. opportunistic pathogens
d. indigenous microflora
e. saprophytes

16. Organisms that live on dead or decaying organic matter.
17. Microorganisms that do not cause disease.
18. Microorganisms that usually do not cause disease, but can cause disease under certain circumstances.
19. The microorganisms that live on us and in us.
20. The most common causes of infectious diseases or microbial intoxications.
21. All infectious diseases are caused by pathogens.
   A) True
   B) False
22. Pathogens greatly outnumber nonpathogens.
   A) True
   B) False
23. Using microorganisms to clean up the environment is known as bioremediation.

A) True
B) False

24. Microorganisms are essential in the field of genetic engineering.

A) True
B) False

25. Microorganisms probably appeared on earth about 3.5 million years ago.

A) True  B) False

26. Anton van Leeuwenhoek’s experiments helped to prove that microorganisms cause disease.

A) True
B) False

27. Louis Pasteur and Robert Koch made significant contributions to the “Germ Theory of Disease”.

A) True
B) False

28. Pasteurization is a process that kills all microorganisms present in the liquid being pasteurize.

A) True
B) False

29. Microorganisms contribute more oxygen to our atmosphere than plants do.

A) True
B) False
30. Infectious diseases that are transmitted from animals to humans are known as zoonoses.

A) True
B) False

Use the following to answer questions 31-34:

Match the following names with the correct statements. a. Robert Koch
   b. Louis Pasteur
   c. Rudolf Virchow
   d. Antony van Leeuwenhoek

31. This German scientist proposed the theory of biogenesis—that life can arise only from preexi

32. This Dutchman built single lens microscopes as a hobby and is believed to be the first person to observe bacteria and protozoa.

33. This German physician developed a step-by-step scientific method to prove that a particular organism causes a particular disease and contributed to what is known as “the germ theory of disease.”

34. This French scientist discovered that microorganisms are responsible for fermentations, thereby disproving abiogenesis, and contributed to what is known as “the germ theory of disease.”
Answer Key

1. A
2. B
3. D
4. D
5. B
6. B
7. D
8. B
5. B
10. B
11. c
12. d
13. e
14. a
15. b
16. e
17. b
18. c
19. d
20. a
21. A
22. B
23. A
26. B
27. A
28. B
29. A
30. A
31. c
32. d
33. a
34. b