Chapter 01 Testbank

Student: _____

1. Disease-causing microorganisms are called
   A. decomposers.
   B. procaryotes.
   C. pathogens.
   D. eucaryotes.
   E. fermenters.

2. The microorganisms that recycle nutrients by breaking down dead matter and wastes are called
   A. decomposers.
   B. prokaryotes.
   C. pathogens.
   D. eukaryotes.
   E. fermenters.

3. The microorganisms that do *not* have a nucleus in their cells are called
   A. decomposers.
   B. prokaryotes.
   C. pathogens.
   D. eukaryotes.
   E. fermenters.

4. When humans manipulate, the genes of microorganisms the process is called
   A. bioremediation.
   B. genetic engineering.
   C. epidemiology.
   D. immunology.
   E. taxonomy.

5. Which of the following is *not* considered a microorganism?
   A. mosquito
   B. protozoa
   C. bacteria
   D. viruses
   E. fungi

6. All microorganisms are best defined as organisms that
   A. cause human disease.
   B. lack a cell nucleus.
   C. are infectious particles.
   D. are too small to be seen with the unaided eye.
   E. can only be found growing in laboratories.

7. Which activity is an example of biotechnology?
   A. bacteria in the soil secreting an antibiotic to kill competitors
   B. a microbiologist using the microscope to study bacteria
   C. humans using yeast to make beer and wine
   D. *Mycobacteria tuberculosis* in the lungs causing tuberculosis
   E. public health officials monitoring diseases in a community

8. Which of the following is a unique characteristic of viruses that distinguishes them from the other major groups of microorganisms?
   A. cause human disease
   B. lack a nucleus
   C. cannot be seen without a microscope
   D. contain genetic material
   E. lack cell structure

9. The Dutch merchant who made and used quality magnifying lenses to see and record microorganisms was
   A. Francesco Redi.
   B. Antonie van Leeuwenhoek.
   C. Louis Pasteur.
   D. Joseph Lister.
   E. Robert Koch.

10. Pasteur used swan-neck flasks in his experiments to prove that
    A. air had "vital forces" capable of spontaneous generation.
    B. microbial fermentation could be used to make wine.
    C. dust in air was a source of living microorganisms.
    D. microorganisms could cause disease.
    E. microorganisms could be grown in laboratory infusions.

11. Which of the following is *not* a process in the scientific method?
    A. belief in a preconceived idea
    B. formulate a hypothesis
    C. systematic observation
    D. laboratory experimentation
    E. development of a theory

12. Spontaneous generation is the belief that
    A. germs cause infectious diseases.
    B. microbes are diverse and ubiquitous.
    C. microbes placed in an infusion can grow in it.
    D. aseptic techniques reduce microbes in medical settings.
    E. living things arise from nonliving matter.

13. Koch's postulates are criteria used to establish that

    A. microbes are found on dust particles.
    B. a specific microbe is the cause of a specific disease.
    C. life forms can only arise from preexisting life forms.
    D. a specific microbe should be classified in a specific kingdom.
    E. microbes can be used to clean up toxic spills.

14. Which of the following is a taxon that contains all the other taxa listed?
    A. species
    B. phylum
    C. kingdom
    D. genus
    E. family

15. Which of the following is a scientific name?
    A. bacteria
    B. Protista
    C. species
    D. *Bacillus subtilis*
    E. bacilli

16. Taxonomy does *not* involve
    A. nomenclature.
    B. classification.
    C. taxa.
    D. identification.
    E. Koch's postulates.

17. The smallest and most significant taxon is
    A. genus.
    B. species.
    C. kingdom.
    D. family.
    E. phylum.

18. The study of evolutionary relationships among organisms is called
    A. biotechnology.
    B. genetics.
    C. recombinant DNA.
    D. phylogeny.
    E. taxonomy.

19. A scientist studying the sequence of nucleotides in the rRNA of a bacterial species is working on
    A. determining evolutionary relatedness.
    B. bioremediation.
    C. recombinant DNA.
    D. nomenclature.
    E. determining if that species is the cause of a new disease.

20. A scientist discovers a new microbial species. It is a single-celled eucaryote without cell walls. In which kingdom will it likely be classified?
    A. Monera
    B. Protista
    C. Fungi
    D. Animalia
    E. Plantae

21. A scientist collects grass clippings to find the source of an outbreak of tularemia is an example of working in the field of
    A. food microbiology.
    B. epidemiology.
    C. agricultural microbiology.
    D. genetic engineering.
    E. biotechnology.

22. Helminths are
    A. bacteria.
    B. protozoa.
    C. molds.
    D. parasitic worms.
    E. infectious particles.

23. All of the following pertain to photosynthesis, *except*

    A. it occurs only in members of the kingdom Plantae.
    B. carbon dioxide is converted to organic material.
    C. it contributes to the oxygen content in the atmosphere.
    D. it is fueled by light.
    E. it is important to each ecosystem's flow of energy and food.

24. Organisms called parasites are
    A. always classified in the kingdom Monera.
    B. always harmful to their host.
    C. the decomposers in ecosystems.
    D. always a virus.
    E. free-living.

25. The surgeon who advocated using disinfectants on hands and in the air prior to surgery was
    A. Joseph Lister.
    B. Ignaz Semmelweis.
    C. Robert Koch.
    D. Louis Pasteur.
    E. Antonie van Leeuwenhoek.

26. Which scientist showed that anthrax was caused by the bacterium, *Bacillus anthracis*?
    A. Joseph Lister
    B. Ignaz Semmelweis
    C. Robert Koch
    D. Louis Pasteur
    E. Antonie van Leeuwenhoek

27. Select the correct descending taxonomic hierarchy (left to right):

    A. family, order, class
    B. family, genus, species
    C. genus, species, family
    D. class, phylum, order
    E. kingdom, domain, phylum

28. When assigning a scientific name to an organism,
    A. the species name is capitalized.
    B. the species name is placed first.
    C. the species name can be abbreviated.
    D. both genus and species names are capitalized.
    E. both genus and species names are italicized or underlined.

29. The scientist/s that proposed assigning organisms to one of three domains is/are
    A. Robert Koch and Louis Pasteur.
    B. Antonie van Leeuwenhoek.
    C. Carl Woese and George Fox.
    D. Robert Whittaker.
    E. Francesco Redi.

30. In Whittaker's system, the protozoa and algae are classified in the kingdom
    A. Monera.
    B. Protista.
    C. Mycetae.
    D. Plantae.
    E. Animalia.

31. Which kingdom does *not* contain any eukaryotes?
    A. Monera
    B. Protista
    C. Mycetae
    D. Plantae
    E. Animalia

32. Which of the following are the main decomposers of the earth?
    A. bacteria and fungi
    B. bacteria and viruses
    C. algae and viruses
    D. protists and fungi
    E. all organisms are decomposers

33. The most common infectious cause of death worldwide is
    A. HIV/AIDS.
    B. stroke.
    C. heart disease.
    D. cancer.
    E. malaria.

34. Which of the following diseases is transmitted by mosquitoes?
    A. diarrheal diseases
    B. tuberculosis
    C. malaria
    D. septicemia
    E. influenza

35. All of the following are correct about prokaryotes, *except*
    A. they are smaller than eukaryotes.
    B. they lack a nucleus.
    C. they are less complex than eukaryotes.
    D. they have organelles.
    E. they are found nearly everywhere.

36. All of the following contribute to the rise of emerging diseases, *except*
    A. the decrease in drug resistant bacteria.
    B. human encroachment on wild habitats.
    C. changes in agricultural practices.
    D. populations are more mobile.

37. Which scientist discovered heat resistant bacterial spores?
    A. Joseph Lister
    B. Ignaz Semmelweis
    C. Robert Koch
    D. Ferdinand Cohn
    E. Antonie van Leeuwenhoek

38. Which of the following is the correct way to type the scientific name of this bacterium?
    A. Staph Aureus
    B. Staphylococcus Aureus
    C. *Staphylococcus aureus*
    D. Staphylococcus Aureus
    E. S. Aureus

39. Where are you most likely to find bacteria belonging to the domain Archaea?
    A. a human's large intestine
    B. in a hot spring
    C. a pond
    D. a sewage treatment plant
    E. a beer production facility

40. When microbes are introduced into the environment to restore stability, the process is called
    A. bioremediation.
    B. genetic engineering.
    C. epidemiology.
    D. immunology.
    E. taxonomy.

41. Which of the following diseases probably involves microbial infection?
    A. gastric ulcers
    B. female infertility
    C. coronary artery disease
    D. cervical cancer
    E. All of the choices are correct.

42. Cyanide is a chemical used to dissolve gold and is harmful to the environment and organisms living there. A couple of biochemists came up with the idea of using the bacteria *Pseudomonas* to break down the cyanide used by a Gold mining company. This use of bacteria is a good example of ____.
    A. Bioremediation
    B. Immunology
    C. Astromicrobiology
    D. British physiology

43. Which of the following branches of Microbiology is important when someone is broken out in hives and experiencing respiratory distress due to an exposure to a microbial toxin?
    A. Agricultural
    B. WHO or CDC
    C. Biotechnology
    D. Immunology

44. Bacteria and fungi are important in bioremediation. These decomposers are also called ___.
    A. Strict aerobes
    B. Strict anaerobes
    C. Saprobes
    D. Predators

45. Members of the same species share many more characteristics compared to those shared by members of the same kingdom.

    True False

46. Viruses are not classified in any of Whittaker's 5 kingdoms.
    True False

47. Members of the kingdom Fungi are photosynthetic.
    True False

48. A scientist studying helminths is working with bacteria.
    True False

49. The fossil record has established that prokaryotes existed on earth for approximately 2 billion years before eukaryotes appeared.
    True False

50. It has been over 25 years since a new infectious disease has emerged in the world.
    True False

51. The term sterile means free of all life forms.
    True False

52. All microorganisms are parasites.
    True False

53. During a scientific experiment, the control group is used to directly test or measure the consequences of a variable in the study.
    True False

54. The scientific method involves formulating a tentative explanation, called the hypothesis, to account for what has been observed or measured.
    True False

55. Once an organism is assigned to a particular taxonomic hierarchy, it is permanent and cannot be revised.
    True False

56. A hypothesis must be tested before it can be considered a theory.
    True False

57. The names of the three proposed Domains are: Bacteria, Protista, Eukarya.
    True False

58. One distinguishing characteristic of the archaebacteria is that they live in extreme environments.
    True False

59. The scientific field called _____ is involved in the identification, classification, and naming of organisms.
    _____

60. _____ is the area of biology that states that living things undergo gradual structural and functional changes over long periods of time.
    _____

61. Living things ordinarily too small to be seen with the unaided eye are termed _____.
    _____

62. _____ are the group of microorganisms composed only of hereditary material wrapped in a protein covering.
    _____

63. A scientist that constructs a hypothesis and then tests its validity by outlining predicted events of the hypothesis followed by experiments to test for those events is using the _____ approach.
    _____

64. Discuss what might be three different beneficial consequences and three different detrimental consequences of killing all microorganisms on the earth.

65. Discuss five of the reasons why infectious diseases are increasing in number around the world.

66. Describe the experiment that Louis Pasteur did with swan-necked-shaped tubes to disprove spontaneous generation.

Chapter 01 Testbank Key

1. Disease-causing microorganisms are called
   A. decomposers.
   B. procaryotes.
   C. pathogens.
   D. eucaryotes.
   E. fermenters.

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

2. The microorganisms that recycle nutrients by breaking down dead matter and wastes are called
   A. decomposers.
   B. prokaryotes.
   C. pathogens.
   D. eukaryotes.
   E. fermenters.

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

3. The microorganisms that do *not* have a nucleus in their cells are called
   A. decomposers.
   B. prokaryotes.
   C. pathogens.
   D. eukaryotes.
   E. fermenters.

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

4. When humans manipulate, the genes of microorganisms the process is called
   A. bioremediation.
   B. genetic engineering.
   C. epidemiology.
   D. immunology.
   E. taxonomy.

Learning objective: 01.02 Name and define the primary areas of study within the science of microbiology.

5. Which of the following is *not* considered a microorganism?
   A. mosquito
   B. protozoa
   C. bacteria
   D. viruses
   E. fungi

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

6. All microorganisms are best defined as organisms that
   A. cause human disease.
   B. lack a cell nucleus.
   C. are infectious particles.
   D. are too small to be seen with the unaided eye.
   E. can only be found growing in laboratories.

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

7. Which activity is an example of biotechnology?
   A. bacteria in the soil secreting an antibiotic to kill competitors
   B. a microbiologist using the microscope to study bacteria
   C. humans using yeast to make beer and wine
   D. *Mycobacteria tuberculosis* in the lungs causing tuberculosis
   E. public health officials monitoring diseases in a community

Learning objective: 01.02 Name and define the primary areas of study within the science of microbiology.

8. Which of the following is a unique characteristic of viruses that distinguishes them from the other major groups of microorganisms?
   A. cause human disease
   B. lack a nucleus
   C. cannot be seen without a microscope
   D. contain genetic material
   E. lack cell structure

01.04 Describe the cellular make up of microorganisms, their size range, and indicate how viruses differ from cellular microbes.
Learning objective: 01.03 Describe the basic characteristics of prokaryotic cells and eukaryotic cells and their evolutionary origins.
Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

9. The Dutch merchant who made and used quality magnifying lenses to see and record microorganisms was
   A. Francesco Redi.
   B. Antonie van Leeuwenhoek.
   C. Louis Pasteur.
   D. Joseph Lister.
   E. Robert Koch.

Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

10. Pasteur used swan-neck flasks in his experiments to prove that
A. air had "vital forces" capable of spontaneous generation.
B. microbial fermentation could be used to make wine.
C. dust in air was a source of living microorganisms.
D. microorganisms could cause disease.
E. microorganisms could be grown in laboratory infusions.

Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

11. Which of the following is *not* a process in the scientific method?
A. belief in a preconceived idea
B. formulate a hypothesis
C. systematic observation
D. laboratory experimentation
E. development of a theory

Learning objective: 01.10 Explain the main features of the scientific method, and differentiate between inductive and deductive reasoning and between hypothesis and theory.

12. Spontaneous generation is the belief that
A. germs cause infectious diseases.
B. microbes are diverse and ubiquitous.
C. microbes placed in an infusion can grow in it.
D. aseptic techniques reduce microbes in medical settings.
E. living things arise from nonliving matter.

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13. Koch's postulates are criteria used to establish that

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C. life forms can only arise from preexisting life forms.
D. a specific microbe should be classified in a specific kingdom.
E. microbes can be used to clean up toxic spills.

Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.

14. Which of the following is a taxon that contains all the other taxa listed?
A. species
B. phylum
C. kingdom
D. genus
E. family

Learning objective: 01.11 Define taxonomy and its supporting terms classification, nomenclature, and identification.

15. Which of the following is a scientific name?
A. bacteria
B. Protista
C. species
D. *Bacillus subtilis*
E. bacilli

Learning objective: 01.11 Define taxonomy and its supporting terms classification, nomenclature, and identification.
Learning objective: 01.13 Describe the goals of nomenclature and how the binomial system is structured. Know how to correctly write a scientific name.

16. Taxonomy does *not* involve
A. nomenclature.
B. classification.
C. taxa.
D. identification.
E. Koch's postulates.

Learning objective: 01.11 Define taxonomy and its supporting terms classification, nomenclature, and identification.

17. The smallest and most significant taxon is
A. genus.
B. species.
C. kingdom.
D. family.
E. phylum.

Learning objective: 01.11 Define taxonomy and its supporting terms classification, nomenclature, and identification.

18. The study of evolutionary relationships among organisms is called
A. biotechnology.
B. genetics.
C. recombinant DNA.
D. phylogeny.
E. taxonomy.

Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.

19. A scientist studying the sequence of nucleotides in the rRNA of a bacterial species is working on
A. determining evolutionary relatedness.
B. bioremediation.
C. recombinant DNA.
D. nomenclature.
E. determining if that species is the cause of a new disease.

01.15 Outline some of the primary evidence used to verify evolutionary trends.
01.16 Explain how the trees of life are constructed, and tell what characteristics are used in organizing the organisms on these trees.
Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

20. A scientist discovers a new microbial species. It is a single-celled eucaryote without cell walls. In which kingdom will it likely be classified?
A. Monera
B. Protista
C. Fungi
D. Animalia
E. Plantae

Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.

21. A scientist collects grass clippings to find the source of an outbreak of tularemia is an example of working in the field of
A. food microbiology.
B. epidemiology.
C. agricultural microbiology.
D. genetic engineering.
E. biotechnology.

Learning objective: 01.02 Name and define the primary areas of study within the science of microbiology.

22. Helminths are
A. bacteria.
B. protozoa.
C. molds.
D. parasitic worms.
E. infectious particles.

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

23. All of the following pertain to photosynthesis, *except*

A. it occurs only in members of the kingdom Plantae.
B. carbon dioxide is converted to organic material.
C. it contributes to the oxygen content in the atmosphere.
D. it is fueled by light.
E. it is important to each ecosystem's flow of energy and food.

Learning objective: 001.05 State several ways that microbes are involved in the earths ecosystems.

24. Organisms called parasites are
A. always classified in the kingdom Monera.
B. always harmful to their host.
C. the decomposers in ecosystems.
D. always a virus.
E. free-living.

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

25. The surgeon who advocated using disinfectants on hands and in the air prior to surgery was
A. Joseph Lister.
B. Ignaz Semmelweis.
C. Robert Koch.
D. Louis Pasteur.
E. Antonie van Leeuwenhoek.

Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

26. Which scientist showed that anthrax was caused by the bacterium, *Bacillus anthracis*?
A. Joseph Lister
B. Ignaz Semmelweis
C. Robert Koch
D. Louis Pasteur
E. Antonie van Leeuwenhoek

Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.

27. Select the correct descending taxonomic hierarchy (left to right):

A. family, order, class
B. family, genus, species
C. genus, species, family
D. class, phylum, order
E. kingdom, domain, phylum

Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.

28. When assigning a scientific name to an organism,
A. the species name is capitalized.
B. the species name is placed first.
C. the species name can be abbreviated.
D. both genus and species names are capitalized.
E. both genus and species names are italicized or underlined.

Learning objective: 01.11 Describe the goals of nomenclature and how the binomial system is structured. Know how to correctly write a scientific name.

29. The scientist/s that proposed assigning organisms to one of three domains is/are
A. Robert Koch and Louis Pasteur.
B. Antonie van Leeuwenhoek.
C. Carl Woese and George Fox.
D. Robert Whittaker.
E. Francesco Redi.

Learning objective: 01.18 Explain how the Domains are classified and how they differ; cite several representatives that belong to each Domain.

30. In Whittaker's system, the protozoa and algae are classified in the kingdom
A. Monera.
B. Protista.
C. Mycetae.
D. Plantae.
E. Animalia.

Learning objective: 01.17 Indicate where the major groups of microorganisms fall on these trees.

31. Which kingdom does *not* contain any eukaryotes?
A. Monera
B. Protista
C. Mycetae
D. Plantae
E. Animalia

Learning objective: 01.17 Indicate where the major groups of microorganisms fall on these trees.

32. Which of the following are the main decomposers of the earth?
A. bacteria and fungi
B. bacteria and viruses
C. algae and viruses
D. protists and fungi
E. all organisms are decomposers

Learning objective: 01.05 State several ways that microbes are involved in the earths ecosystems.

33. The most common infectious cause of death worldwide is
A. HIV/AIDS.
B. stroke.
C. heart disease.
D. cancer.
E. malaria.

Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.

34. Which of the following diseases is transmitted by mosquitoes?
A. diarrheal diseases
B. tuberculosis
C. malaria
D. septicemia
E. influenza

Learning objective: 01.03 Describe the basic characteristics of prokaryotic cells and eukaryotic cells and their evolutionary origins.
Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.

35. All of the following are correct about prokaryotes, *except*
A. they are smaller than eukaryotes.
B. they lack a nucleus.
C. they are less complex than eukaryotes.
D. they have organelles.
E. they are found nearly everywhere.

Learning objective: 01.03 Describe the basic characteristics of prokaryotic cells and eukaryotic cells and their evolutionary origins.

36. All of the following contribute to the rise of emerging diseases, *except*
A. the decrease in drug resistant bacteria.
B. human encroachment on wild habitats.
C. changes in agricultural practices.
D. populations are more mobile.

Learning objective: 01.08 Define what is meant by emerging and re-emerging diseases.

37. Which scientist discovered heat resistant bacterial spores?
A. Joseph Lister
B. Ignaz Semmelweis
C. Robert Koch
D. Ferdinand Cohn
E. Antonie van Leeuwenhoek

Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

38. Which of the following is the correct way to type the scientific name of this bacterium?
A. Staph Aureus
B. Staphylococcus Aureus
C. *Staphylococcus aureus*
D. Staphylococcus Aureus
E. S. Aureus

Learning objective: 01.13 Describe the goals of nomenclature and how the binomial system is structured. Know how to correctly write a scientific name.

39. Where are you most likely to find bacteria belonging to the domain Archaea?
A. a human's large intestine
B. in a hot spring
C. a pond
D. a sewage treatment plant
E. a beer production facility

Learning objective: 01.18 Explain how the Domains are classified and how they differ; cite several representatives that belong to each Domain.

40. When microbes are introduced into the environment to restore stability, the process is called
A. bioremediation.
B. genetic engineering.
C. epidemiology.
D. immunology.
E. taxonomy.

Learning objective: 01.05 State several ways that microbes are involved in the earths ecosystems.

41. Which of the following diseases probably involves microbial infection?
A. gastric ulcers
B. female infertility
C. coronary artery disease
D. cervical cancer
E. All of the choices are correct.

Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.

42. Cyanide is a chemical used to dissolve gold and is harmful to the environment and organisms living there. A couple of biochemists came up with the idea of using the bacteria *Pseudomonas* to break down the cyanide used by a Gold mining company. This use of bacteria is a good example of ____.
A. Bioremediation
B. Immunology
C. Astromicrobiology
D. British physiology

Learning objective: 01.06 Discuss the ways microorganisms may be applied to solve human problems.

43. Which of the following branches of Microbiology is important when someone is broken out in hives and experiencing respiratory distress due to an exposure to a microbial toxin?
A. Agricultural
B. WHO or CDC
C. Biotechnology
D. Immunology

Learning objective: 01.02 Name and define the primary areas of study within the science of microbiology.

44. Bacteria and fungi are important in bioremediation. These decomposers are also called ___.
A. Strict aerobes
B. Strict anaerobes
C. Saprobes
D. Predators

Learning objective: 01.05 State several ways that microbes are involved in the earths ecosystems.

45. Members of the same species share many more characteristics compared to those shared by members of the same kingdom.

TRUE

Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.

46. Viruses are not classified in any of Whittaker's 5 kingdoms.
TRUE

01.04 Describe the cellular make up of microorganisms, their size range, and indicate how viruses differ from cellular microbes.
Learning objective: 01.04 Describe the cellular make up of microorganisms, their size range, and indicate how viruses differ from cellular microbes.

47. Members of the kingdom Fungi are photosynthetic.
FALSE

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

48. A scientist studying helminths is working with bacteria.
FALSE

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

49. The fossil record has established that prokaryotes existed on earth for approximately 2 billion years before eukaryotes appeared.
TRUE

01.15 Outline some of the primary evidence used to verify evolutionary trends.

50. It has been over 25 years since a new infectious disease has emerged in the world.
FALSE

01.15 Outline some of the primary evidence used to verify evolutionary trends.

51. The term sterile means free of all life forms.
TRUE

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

52. All microorganisms are parasites.
FALSE

Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.

53. During a scientific experiment, the control group is used to directly test or measure the consequences of a variable in the study.
FALSE

Learning objective: 01.10 Explain the main features of the scientific method, and differentiate between inductive and deductive reasoning and between hypothesis and theory.

54. The scientific method involves formulating a tentative explanation, called the hypothesis, to account for what has been observed or measured.
TRUE

Learning objective: 01.10 Explain the main features of the scientific method, and differentiate between inductive and deductive reasoning and between hypothesis and theory.

55. Once an organism is assigned to a particular taxonomic hierarchy, it is permanent and cannot be revised.
FALSE

Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.

56. A hypothesis must be tested before it can be considered a theory.
TRUE

Learning objective: 01.10 Explain the main features of the scientific method, and differentiate between inductive and deductive reasoning and between hypothesis and theory.

57. The names of the three proposed Domains are: Bacteria, Protista, Eukarya.
FALSE

Learning objective: 01.18 Explain how the Domains are classified and how they differ; cite several representatives that belong to each Domain.

58. One distinguishing characteristic of the archaebacteria is that they live in extreme environments.
TRUE

Learning objective: 01.18 Explain how the Domains are classified and how they differ; cite several representatives that belong to each Domain.

59. The scientific field called _____ is involved in the identification, classification, and naming of organisms.
taxonomy

Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.

60. _____ is the area of biology that states that living things undergo gradual structural and functional changes over long periods of time.
Evolution

Learning objective: 01.14 Discuss the fundamentals of evolution and how it is used in studying organisms.

61. Living things ordinarily too small to be seen with the unaided eye are termed _____.
microorganisms

Learning objective: 01.02 Name and define the primary areas of study within the science of microbiology.

62. _____ are the group of microorganisms composed only of hereditary material wrapped in a protein covering.
Viruses

01.04 Describe the cellular make up of microorganisms, their size range, and indicate how viruses differ from cellular microbes.

63. A scientist that constructs a hypothesis and then tests its validity by outlining predicted events of the hypothesis followed by experiments to test for those events is using the _____ approach.
deductive

Learning objective: 01.10 Explain the main features of the scientific method, and differentiate between inductive and deductive reasoning and between hypothesis and theory.

64. Discuss what might be three different beneficial consequences and three different detrimental consequences of killing all microorganisms on the earth.

Learning objective: 01.06 Discuss the ways microorganisms may be applied to solve human problems.

65. Discuss five of the reasons why infectious diseases are increasing in number around the world.

Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.

66. Describe the experiment that Louis Pasteur did with swan-necked-shaped tubes to disprove spontaneous generation.

Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.

Chapter 01 Testbank Summary

Category	*# of Questions*
01.04 Describe the cellular make up of microorganisms, their size range, and indicate how viruses differ from cellular microbes.	3
01.15 Outline some of the primary evidence used to verify evolutionary trends.	3
01.16 Explain how the trees of life are constructed, and tell what characteristics are used in organizing the organisms on these trees.	1
Learning objective: 001.05 State several ways that microbes are involved in the earths ecosystems.	1
Learning objective: 01.01 Define microbiology and microorganisms and identify the major organisms included in the science.	11
Learning objective: 01.02 Name and define the primary areas of study within the science of microbiology.	5
Learning objective: 01.03 Describe the basic characteristics of prokaryotic cells and eukaryotic cells and their evolutionary origins.	2
Learning objective: 01.03 Describe the basic characteristics of prokaryotic cells and eukaryotic cells and their evolutionary origins.	1
Learning objective: 01.04 Describe the cellular make up of microorganisms, their size range, and indicate how viruses differ from cellular microbes.	1
Learning objective: 01.05 State several ways that microbes are involved in the earths ecosystems.	3
Learning objective: 01.06 Discuss the ways microorganisms may be applied to solve human problems.	2
Learning objective: 01.07 Review the roles of microorganisms as pathogens that cause infection and disease.	6
Learning objective: 01.08 Define what is meant by emerging and re-emerging diseases.	1
Learning objective: 01.09 Outline the major events in the history of microbiology including the major contributors to the early development of microscopy, medical advances, aseptic techniques, and the germ theory of disease.	7
Learning objective: 01.10 Explain the main features of the scientific method, and differentiate between inductive and deductive reasoning and between hypothesis and theory.	6
Learning objective: 01.11 Define taxonomy and its supporting terms classification, nomenclature, and identification.	4
Learning objective: 01.11 Describe the goals of nomenclature and how the binomial system is structured. Know how to correctly write a scientific name.	1
Learning objective: 01.12 Explain how the levels of a taxonomic scheme relate to each other. Give the names of the levels, and place them in a hierarchy.	6
Learning objective: 01.13 Describe the goals of nomenclature and how the binomial system is structured. Know how to correctly write a scientific name.	2
Learning objective: 01.14 Discuss the fundamentals of evolution and how it is used in studying organisms.	1
Learning objective: 01.17 Indicate where the major groups of microorganisms fall on these trees.	2
Learning objective: 01.18 Explain how the Domains are classified and how they differ; cite several representatives that belong to each Domain.	4