Test Bank for Microbiology Systems Approach 6th Edition by Kelly

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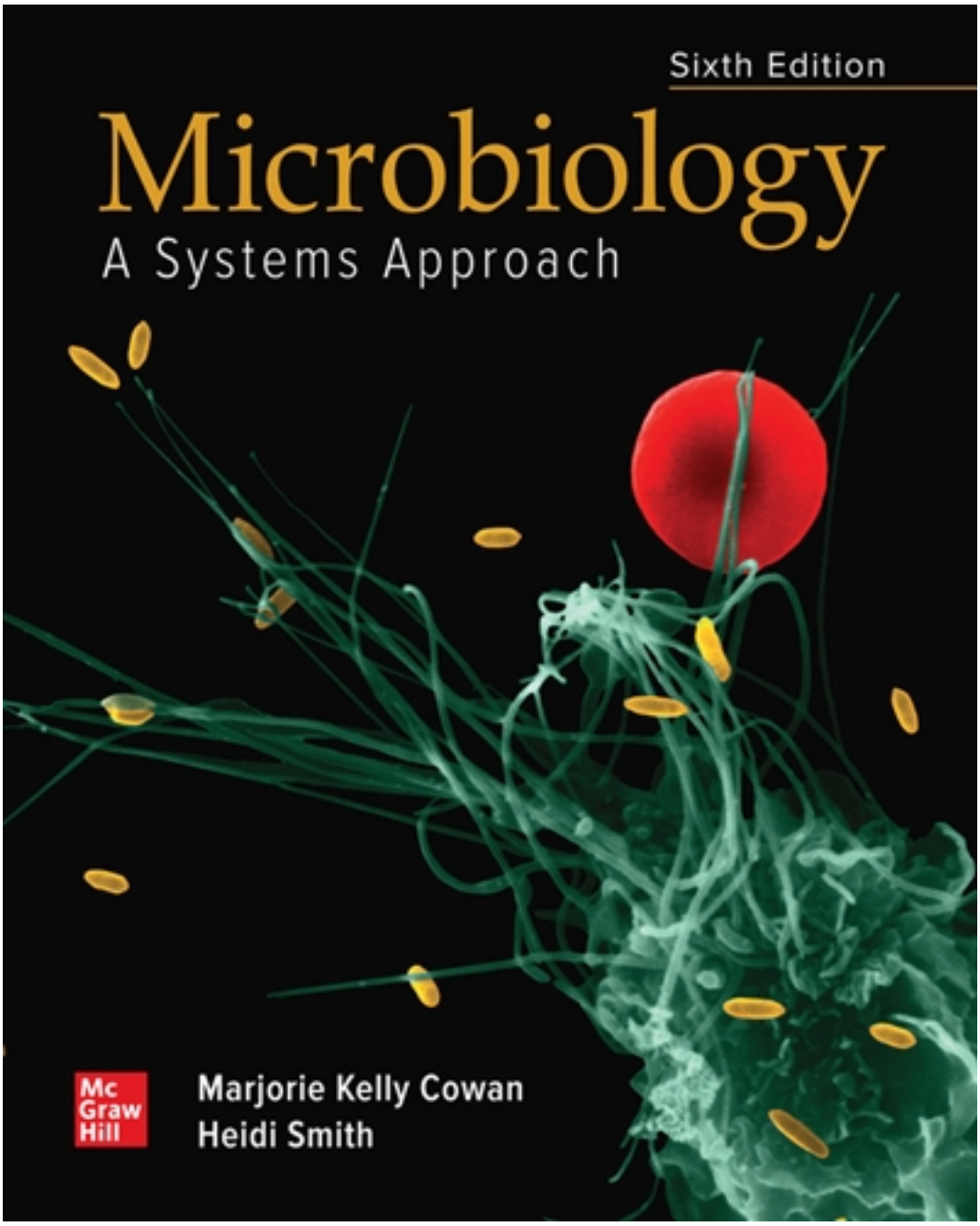

Test Bank

Microbiology Systems Approach 6th Edition by Kelly CH01

ANSWERS ARE LOCATED IN THE SECOND PART OF THIS DOCUMENT

TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.

1) A hypothesis must be tested many times before it can be considered a theory.

- ◎ true
- ◎ false

Question Details
Learning Outcome : 01.12 Explain what is important about the scientific method.
Learning Outcome : 01.04 Explain the theory of evolution and why it is called a theory.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01a Ability to apply the process of science: Demonstrate an ability to formulate h
Bloom's : 1. Remember
Section : 01.02
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

2) Many chronic medical conditions have been found to be associated with microbial agents.

- ◎ true
- ◎ false

Question Details
Learning Outcome : 01.06 Summarize the relative burden of human disease caused by microbes, emphasizi
ASM Topic : Module 05 Systems
ASM Objective : 05.04 Microorganisms, cellular and viral, can interact with both human and nonhuman h
Bloom's : 1. Remember
Section : 01.04
Topic : History of Microbiology
Topic : Microbial Roles
Accessibility : Keyboard Navigation

3) All bacteria and archaea are microorganisms, but only some eukaryotes are microorganisms.

- ◎ true
- ◎ false

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.07 Differentiate among bacteria, archaea, and eukaryotic microorganisms.
ASM Topic : Module 02 Structure and Function
Bloom's : 2. Understand
Section : 01.05
Topic : Cellular Organization
ASM Objective : 02.01 The structure and function of microorganisms have been revealed by the use of m
Accessibility : Keyboard Navigation

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

- ◎ true
- ◎ false

Question Details
Learning Outcome : 01.12 Explain what is important about the scientific method.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01a Ability to apply the process of science: Demonstrate an ability to formulate h
Bloom's : 1. Remember
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

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

- ◎ true
- ◎ false

Question Details
Learning Outcome : 01.13 Differentiate among the terms nomenclature, taxonomy, and classification.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 2. Understand
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

6) The names of the three proposed domains are: Bacteria, Protista, and Eukarya.

◎ true
◎ false

Question Details
Learning Outcome : 01.16 Draw a diagram of the three major domains.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

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

7) 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

Question Details
Learning Outcome : 01.01 List the six types of microorganisms we will be studying in this book.
ASM Topic : Module 02 Structure and Function
Bloom's : 1. Remember
Section : 01.01
Topic : Cellular Organization
ASM Objective : 02.01 The structure and function of microorganisms have been revealed by the use of m
Accessibility : Keyboard Navigation

8) Which of the following are not considered microorganisms?

A) Mosquitoes
B) Protozoa
C) Bacteria
D) Viruses
E) Fungi

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.01 List the six types of microorganisms we will be studying in this book.
ASM Topic : Module 05 Systems
ASM Objective : 05.01 Microorganisms are ubiquitous and live in diverse and dynamic ecosystems.
Bloom's : 2. Understand
Section : 01.01
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

9) Helminths are _____.

A) bacteria
B) protozoa
C) molds
D) parasitic worms
E) infectious particles

Question Details
Learning Outcome : 01.01 List the six types of microorganisms we will be studying in this book.
ASM Topic : Module 02 Structure and Function
ASM Objective : 02.04 While microscopic eukaryotes (for example, fungi, protozoa, and algae) carry ou
Bloom's : 1. Remember
Section : 01.01
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

10) Among these types of microorganisms, the _____ arenoncellular.

A) viruses
B) helminths
C) protozoans
D) bacteria

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.01 List the six types of microorganisms we will be studying in this book.
Learning Outcome : 01.08 Identify two types of acellular microorganisms.
ASM Topic : Module 02 Structure and Function
Bloom's : 1. Remember
Section : 01.01
Section : 01.05
Topic : Cellular Organization
ASM Objective : 02.05 The replication cycles of viruses (lytic and lysogenic) differ among viruses a
Accessibility : Keyboard Navigation

11) Studies of the immune response to an infection caused by microorganisms would be performed by a/an _____.

A) hypersensitivity specialist
B) epidemiologist
C) immunologist
D) geomicrobiologist

Question Details
Learning Outcome : 01.02 Identify multiple professions using microbiology.
ASM Topic : Module 05 Systems
ASM Objective : 05.04 Microorganisms, cellular and viral, can interact with both human and nonhuman h
Bloom's : 1. Remember
Section : 01.01
Topic : Microbial Roles
Accessibility : Keyboard Navigation

12) Which of the following pairs of career descriptions and work tasks is not correctly matched?

A) Industrial microbiologist -- manipulate bacterial strains to be less pathogenic
B) Agricultural microbiologist -- identify bacterial causes of crop disease
C) Public health microbiologist -- track the incidence of AIDS in a population
D) Medical microbiologist -- identify the cause of a bladder infection at a hospital lab

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.02 Identify multiple professions using microbiology.
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 06.03 Humans utilize and harness microorganisms and their products.
Bloom's : 1. Remember
Section : 01.01
Topic : Microbial Roles
Accessibility : Keyboard Navigation

13) A scientist who studies the influence of microbes in the formation of caves is called a/an _____.

A) geomicrobiologist
B) astrobiologist
C) epidemiologist
D) immunologist

Question Details
Learning Outcome : 01.02 Identify multiple professions using microbiology.
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 06.01 Microbes are essential for life as we know it and the processes that support li
Bloom's : 1. Remember
Section : 01.01
Topic : Microbial Roles
Accessibility : Keyboard Navigation

14) Astrobiology is considered a sub-discipline of microbiology because _____.

A) life elsewhere in the universe is likely to be microbial
B) microbes are known to exist on other planets
C) all extraterrestrials known are microbial
D) only microbes can reproduce under the extreme conditions in outer space

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.02 Identify multiple professions using microbiology.
ASM Topic : Module 01 Evolution
ASM Topic : Module 05 Systems
ASM Objective : 05.01 Microorganisms are ubiquitous and live in diverse and dynamic ecosystems.
Bloom's : 3. Apply
Section : 01.01
Topic : Microbial Roles
Accessibility : Keyboard Navigation

15) Which of the following does not indicate microbe involvement in energy and nutrient flow?

A) Thermal hot springs warmed by heat from earth's interior
B) Formation of greenhouse gases, CO_2 and methane
C) Digestion of complex carbohydrates in animal diets
D) Decomposition of dead matter and wastes

Question Details
Learning Outcome : 01.03 Describe the role and impact of microbes on the earth.
ASM Topic : Module 05 Systems
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 05.01 Microorganisms are ubiquitous and live in diverse and dynamic ecosystems.
ASM Objective : 06.01 Microbes are essential for life as we know it and the processes that support li
Bloom's : 2. Understand
Section : 01.02
Topic : Microbial Roles
Accessibility : Keyboard Navigation

16) The microorganisms that recycle nutrients by breaking down dead matter and wastes are called _____.

A) decomposers
B) prokaryotes
C) pathogens
D) eukaryotes
E) fermenters

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.03 Describe the role and impact of microbes on the earth.
ASM Topic : Module 03 Metabolic Pathways
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 03.01 Bacteria and Archaea exhibit extensive, and often unique, metabolic diversity (
ASM Objective : 06.01 Microbes are essential for life as we know it and the processes that support li
Bloom's : 1. Remember
Section : 01.02
Topic : Microbial Roles
Accessibility : Keyboard Navigation

17) The majority of oxygen in earth's atmosphere is a product of photosynthesis by _____.

A) microorganisms
B) rain forests
C) agricultural lands
D) green plants

Question Details
Learning Outcome : 01.03 Describe the role and impact of microbes on the earth.
ASM Topic : Module 05 Systems
ASM Objective : 05.01 Microorganisms are ubiquitous and live in diverse and dynamic ecosystems.
ASM Objective : 06.01 Microbes are essential for life as we know it and the processes that support li
Bloom's : 1. Remember
Section : 01.02
Topic : Microbial Roles
Accessibility : Keyboard Navigation

18) The three cell types discussed, eukaryotes, archaea, and bacteria, all derived from _____.

A) a common ancestral cell
B) photosynthetic bacteria
C) archaea
D) cells with a true nucleus

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.04 Explain the theory of evolution and why it is called a theory.
ASM Topic : Module 01 Evolution
ASM Objective : 01.01 Cells, organelles (e.g., mitochondria and chloroplasts) and all major metabolic
Bloom's : 2. Understand
Section : 01.02
Topic : Cellular Organization
Accessibility : Keyboard Navigation

19) The first cells appeared about _____ billion years ago.

A) 5
B) 4
C) 3.5
D) 2
E) 1

Question Details
Learning Outcome : 01.04 Explain the theory of evolution and why it is called a theory.
ASM Topic : Module 01 Evolution
ASM Objective : 01.01 Cells, organelles (e.g., mitochondria and chloroplasts) and all major metabolic
Bloom's : 1. Remember
Section : 01.02
Topic : Cellular Organization
Accessibility : Keyboard Navigation

20) Which area of biology states that living things undergo gradual structural and functional changes over long periods of time?

A) Morphology
B) Phylogeny
C) Evolution
D) Genetics
E) Transformation

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.04 Explain the theory of evolution and why it is called a theory.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.02
Topic : History of Microbiology
Accessibility : Keyboard Navigation

21) When humans manipulate the genes of microorganisms, the process is called _____.

A) bioremediation
B) genetic engineering
C) epidemiology
D) immunology
E) taxonomy

Question Details
Learning Outcome : 01.05 Explain one old way and one new way that humans manipulate organisms for the
ASM Topic : Module 04 Information Flow
ASM Topic : Module 05 Systems
ASM Objective : 04.05 Cell genomes can be manipulated to alter cell function.
ASM Objective : 06.03 Humans utilize and harness microorganisms and their products.
Bloom's : 1. Remember
Section : 01.03
Topic : Microbial Roles
Accessibility : Keyboard Navigation

22) 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 view bacteria
C) Egyptians usingmoldy bread on wounds
D) *Escherichia coli* producing human insulin
E) Public health officials monitoring diseases in a community

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.05 Explain one old way and one new way that humans manipulate organisms for the
ASM Topic : Module 04 Information Flow
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 06.03 Humans utilize and harness microorganisms and their products.
Bloom's : 2. Understand
Section : 01.03
Topic : Microbial Roles
Accessibility : Keyboard Navigation

23) Which of the following is a traditional human use of microorganisms?

A) Baking bread
B) Treating water and sewage
C) Mass-producing antibiotics
D) Cleaning up oil spills

Question Details
Learning Outcome : 01.05 Explain one old way and one new way that humans manipulate organisms for the
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 06.03 Humans utilize and harness microorganisms and their products.
Bloom's : 2. Understand
Section : 01.03
Topic : Microbial Roles
Accessibility : Keyboard Navigation

24) Using microbes to detoxify a site contaminated with heavy metals is an example of _____.

A) biotechnology
B) bioremediation
C) decomposition
D) immunology
E) epidemiology

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.05 Explain one old way and one new way that humans manipulate organisms for the
ASM Topic : Module 06 Impact of Microorganisms
ASM Objective : 06.03 Humans utilize and harness microorganisms and their products.
Bloom's : 1. Remember
Section : 01.03
Topic : Microbial Roles
Accessibility : Keyboard Navigation

25) Disease-causing microorganisms are called _____.

A) decomposers
B) bacteria
C) pathogens
D) eukaryotes
E) fermenters

Question Details
Learning Outcome : 01.06 Summarize the relative burden of human disease caused by microbes, emphasizi
ASM Topic : Module 05 Systems
ASM Objective : 05.04 Microorganisms, cellular and viral, can interact with both human and nonhuman h
Bloom's : 1. Remember
Section : 01.04
Topic : Microbial Roles
Accessibility : Keyboard Navigation

26) The number one worldwide infectious diseases are _____.

A) AIDS-related diseases
B) diarrheal diseases
C) malaria and other protozoan diseases
D) measles and other rash diseases
E) respiratory diseases

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.06 Summarize the relative burden of human disease caused by microbes, emphasizi
ASM Topic : Module 05 Systems
ASM Objective : 05.04 Microorganisms, cellular and viral, can interact with both human and nonhuman h
Bloom's : 3. Apply
Section : 01.04
Topic : Microbial Roles
Accessibility : Keyboard Navigation

27) The incidence of deaths from communicable disease is _____ in the United States compared to the entire world.

A) less
B) greater
C) about the same

Question Details
Learning Outcome : 01.06 Summarize the relative burden of human disease caused by microbes, emphasizi
ASM Topic : Module 05 Systems
ASM Objective : 05.04 Microorganisms, cellular and viral, can interact with both human and nonhuman h
Bloom's : 2. Understand
Section : 01.04
Topic : Microbial Roles
Accessibility : Keyboard Navigation

28) In which way are bacteria and eukaryotes the same?

A) Contain membrane-bound organelles
B) Possess a cell membrane
C) Contain a nucleus to hold DNA
D) Always have a cell wall for rigidity

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.07 Differentiate among bacteria, archaea, and eukaryotic microorganisms.
ASM Topic : Module 02 Structure and Function
ASM Objective : 02.02 Bacteria have unique cell structures that can be targets for antibiotics, immun
Bloom's : 2. Understand
Section : 01.05
Topic : Cellular Organization
Accessibility : Keyboard Navigation

29) In which way are archaea and eukaryotesthe same?

A) Contain membrane-bound organelles
B) Have similar ssu rRNA sequences
C) Contain mitochondria for energy production
D) Possess RNA instead of DNA

Question Details
Learning Outcome : 01.07 Differentiate among bacteria, archaea, and eukaryotic microorganisms.
ASM Topic : Module 02 Structure and Function
ASM Objective : 02.02 Bacteria have unique cell structures that can be targets for antibiotics, immun
Bloom's : 2. Understand
Section : 01.05
Topic : Cellular Organization
Accessibility : Keyboard Navigation

30) 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

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.08 Identify two types of acellular microorganisms.
ASM Topic : Module 02 Structure and Function
ASM Objective : 04.04 The synthesis of viral genetic material and proteins is dependent on host cells
Bloom's : 2. Understand
Section : 01.05
Topic : Cellular Organization
Accessibility : Keyboard Navigation

31) Which group of microorganisms is composed only of hereditary material wrapped in a protein covering?

A) Viruses
B) Bacteria
C) Parasites
D) Fungi
E) Yeasts

Question Details
Learning Outcome : 01.08 Identify two types of acellular microorganisms.
ASM Topic : Module 02 Structure and Function
ASM Objective : 05.04 Microorganisms, cellular and viral, can interact with both human and nonhuman h
Bloom's : 1. Remember
Section : 01.05
Topic : Cellular Organization
Accessibility : Keyboard Navigation

32) Eukaryotic cells are larger than bacterial or archaeal cells; allcells are larger than macromolecules. Where do viruses fit on this scale?

A) Viruses are larger than eukaryotic cells.
B) Viruses are smaller than eukaryotic cells, but larger than bacterial or archaeal cells.
C) Viruses are smaller than bacterial or archaeal cells, but larger than macromolecules.
D) Viruses are smaller than macromolecules.

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.09 Compare and contrast the relative sizes of the different microbes.
Learning Outcome : 01.08 Identify two types of acellular microorganisms.
ASM Topic : Module 02 Structure and Function
Bloom's : 3. Apply
Section : 01.05
Topic : Cellular Organization
ASM Objective : 02.01 The structure and function of microorganisms have been revealed by the use of m
Accessibility : Keyboard Navigation

33) In general, eukaryotic cells are about _____ times larger than bacterial or archaeal cells.

A) 2
B) 10
C) 50
D) 1000

Question Details
Learning Outcome : 01.09 Compare and contrast the relative sizes of the different microbes.
ASM Topic : Module 02 Structure and Function
Bloom's : 1. Remember
Section : 01.05
Topic : Cellular Organization
ASM Objective : 02.01 The structure and function of microorganisms have been revealed by the use of m
Accessibility : Keyboard Navigation

34) Archaealcells are about _____ bacterial cells.

A) the same size as
B) ten times larger than
C) ten times smaller than

Microbiology Systems Approach 6th Edition by Kelly CH01

Question Details
Learning Outcome : 01.09 Compare and contrast the relative sizes of the different microbes.
ASM Topic : Module 02 Structure and Function
Bloom's : 2. Understand
Section : 01.05
Topic : Cellular Organization
ASM Objective : 02.01 The structure and function of microorganisms have been revealed by the use of m
Accessibility : Keyboard Navigation

35) Which of the following historical microbiologists is incorrectly paired with his contribution to the science?

A) Francesco Redi: tested spontaneous generation with meat exposed to the air or covered with cloth
B) Antonie van Leeuwenhoek:made and used quality magnifying lenses to observe and record microorganisms
C) Louis Pasteur: demonstrated that anthrax was caused by a bacterium
D) Joseph Lister: promoted disinfecting hands and air prior to surgery

Question Details
Learning Outcome : 01.10 Make a time line of the development of microbiology from the 1600s to today.
ASM Topic : Module 02 Structure and Function
Bloom's : 3. Apply
Section : 01.06
Topic : History of Microbiology
ASM Objective : 02.01 The structure and function of microorganisms have been revealed by the use of m
Accessibility : Keyboard Navigation

36) In the experiments constructed by Pasteur to disprove spontaneous generation, swan-necked flasks were used. Why was this shape of flask used in this experiment?

A) The glass necks needed to be open to the air, yet constructed so that bacteria would settle in the lowest part of the neck.

B) These flask shapes were the easiest and cheapest to produce.

C) The shape of the glass neck allowed the bacteria into the flask and then into the media, but air could not enter.

D) Because the glass necks were stretched out, the heat used to sterilize the medium inside of the flask could not kill the bacteria in the neck.

Question Details
Learning Outcome : 01.10 Make a time line of the development of microbiology from the 1600s to today.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01a Ability to apply the process of science: Demonstrate an ability to formulate h
Bloom's : 2. Understand
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

37) 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

Question Details
Learning Outcome : 01.10 Make a time line of the development of microbiology from the 1600s to today.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01b Ability to apply the process of science: Analyze and interpret results from a
Bloom's : 1. Remember
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

38) Which of the following is NOT a recent discovery that has had a huge impact on the understanding of microbiology?

A) Restriction enzymes
B) PCR technique
C) Human microbiome project
D) Small RNAs
E) All are significant discoveries.

Question Details
Learning Outcome : 01.11 List some recent microbiological discoveries of great impact.
ASM Topic : Module 05 Systems
ASM Objective : 06.03 Humans utilize and harness microorganisms and their products.
ASM Objective : 06.04 Because the true diversity of microbial life is largely unknown, its effects an
Bloom's : 1. Remember
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

39) The sum total of all the microbes in a certain environment is termed the _____.

A) microbiome
B) biofilm
C) microbial niche
D) domain
E) phylogeny

Question Details
Learning Outcome : 01.11 List some recent microbiological discoveries of great impact.
ASM Topic : Module 05 Systems
ASM Objective : 05.01 Microorganisms are ubiquitous and live in diverse and dynamic ecosystems.
Bloom's : 1. Remember
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

40) Which of the following is not a process in the scientific method?

A) Belief in a preconceived idea
B) Formulation ofa hypothesis
C) Systematic observation
D) Laboratory experimentation
E) Development of a theory

Question Details
Learning Outcome : 01.12 Explain what is important about the scientific method.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01a Ability to apply the process of science: Demonstrate an ability to formulate h
Bloom's : 2. Understand
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

41) Experimentation _____.

A) is designed to refute an hypothesis
B) is designed to support an hypothesis
C) provides a means to gather subjective data
D) provides a means to gather objective data
E) is the first step in the scientific method

Question Details
Learning Outcome : 01.12 Explain what is important about the scientific method.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01a Ability to apply the process of science: Demonstrate an ability to formulate h
Bloom's : 2. Understand
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

42) The scientific method includes all of the following except _____.

A) hypothesis
B) experimentation
C) observation
D) publication

Question Details
Learning Outcome : 01.12 Explain what is important about the scientific method.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01a Ability to apply the process of science: Demonstrate an ability to formulate h
Bloom's : 2. Understand
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

43) Caring for patients infected with a new virus requires safety precautions for medical personnel. Choosing appropriate procedures is an example of a/an _____ process.

A) deductive
B) inductive
C) hypothetical
D) pathogenic

Question Details
Learning Outcome : 01.12 Explain what is important about the scientific method.
ASM Topic : Module 07 Scientific Thinking
ASM Objective : 07.01b Ability to apply the process of science: Analyze and interpret results from a
Bloom's : 3. Apply
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

44) Sterile is best described as _____.

A) pathogen-free
B) absence of spores
C) absence of any life forms and viral particles
D) pasteurized
E) homogenized

Question Details
Learning Outcome : 01.10 Make a time line of the development of microbiology from the 1600s to today.
ASM Topic : Module 05 Systems
ASM Objective : 05.01 Microorganisms are ubiquitous and live in diverse and dynamic ecosystems.
Bloom's : 1. Remember
Section : 01.06
Topic : History of Microbiology
Accessibility : Keyboard Navigation

45) Taxonomy does not involve _____.

A) nomenclature
B) classification
C) identification
D) a common name

Question Details
Learning Outcome : 01.13 Differentiate among the terms nomenclature, taxonomy, and classification.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

46) Which scientific field is involved in the identification, classification, and naming of organisms?

A) Nomenclature
B) Taxonomy
C) Phylogeny
D) Pathology
E) Epidemiology

Question Details
Learning Outcome : 01.13 Differentiate among the terms nomenclature, taxonomy, and classification.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

47) The orderly arrangement of organisms into a hierarchy of taxa is called _____.

A) classification
B) identification
C) nomenclature
D) experimentation
E) biotechnology

Question Details
Learning Outcome : 01.13 Differentiate among the terms nomenclature, taxonomy, and classification.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

48) Which of the following is a taxon that contains all the other taxa listed?

A) Species
B) Phylum
C) Kingdom
D) Genus
E) Family

Question Details
Learning Outcome : 01.14 Create a mnemonic device for remembering the taxonomic categories.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

49) The smallest and most significant taxon is a _____.

A) genus
B) species
C) kingdom
D) family
E) phylum

Question Details
Learning Outcome : 01.14 Create a mnemonic device for remembering the taxonomic categories.
ASM Topic : Module 01 Evolution
ASM Objective : 01.04 The traditional concept of species is not readily applicable to microbes due to
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

50) 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

Question Details
Learning Outcome : 01.14 Create a mnemonic device for remembering the taxonomic categories.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 2. Understand
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

51) A mnemonic for remembering the taxonomic levels from Domain to Species is "Dear King Phillip Came Over for Good Soup." The word "came" here is a reminder of the taxonomic level of _____.

A) class
B) category
C) chain
D) colony
E) culture

Question Details
Learning Outcome : 01.14 Create a mnemonic device for remembering the taxonomic categories.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 3. Apply
Section : 01.06
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

52) Which of the following is a scientific name?

A) Gram-positive streptococcus
B) *Streptococcus pyogenes*
C) Anthrax
D) Streptobacilli

Question Details
Learning Outcome : 01.15 Correctly write the binomial name for a microorganism.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 2. Understand
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

53) 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

Question Details
Learning Outcome : 01.15 Correctly write the binomial name for a microorganism.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

54) Which scientific name is written correctly?

A) Staphylococcus aureus
B) staphylococcus aureus
C) Staphylococcus Aureus
D) *Staphylococcusaureus*
E) S. aureus

Question Details
Learning Outcome : 01.15 Correctly write the binomial name for a microorganism.
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 2. Understand
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

55) A diagram of the three domains (Bacteria, Archaea, Eukarya) proceeding from the Last CommonAncestor would show Archaea _____.

A) as the original cells from which the others derived
B) branching off the Domain Eukarya
C) branching off the Domain Bacteria

Question Details
Learning Outcome : 01.16 Draw a diagram of the three major domains.
ASM Topic : Module 01 Evolution
ASM Objective : 01.01 Cells, organelles (e.g., mitochondria and chloroplasts) and all major metabolic
Bloom's : 3. Apply
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

56) Analysis of the small subunit rRNAs from all organisms in the three current domains suggests that _____.

A) the eukaryotes arose from prokaryotes
B) the Archaea are more closely related to bacteria than eukaryotes
C) all modern and extinct organisms on earth arose from a common ancestor
D) bacteria, archaea, and eukaryotes are not related

Question Details
Learning Outcome : 01.16 Draw a diagram of the three major domains.
Learning Outcome : 01.17 Explain the difference between traditional and molecular approaches to taxon
ASM Topic : Module 01 Evolution
ASM Objective : 01.01 Cells, organelles (e.g., mitochondria and chloroplasts) and all major metabolic
Bloom's : 2. Understand
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

57) The study of evolutionary relationships among organisms is called _____.

A) biotechnology
B) genetics
C) recombinant DNA
D) phylogeny
E) taxonomy

Question Details
Learning Outcome : 01.04 Explain the theory of evolution and why it is called a theory.
Learning Outcome : 01.17 Explain the difference between traditional and molecular approaches to taxon
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 1. Remember
Section : 01.02
Section : 01.07
Topic : History of Microbiology
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

58) 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

Question Details
Learning Outcome : 01.17 Explain the difference between traditional and molecular approaches to taxon
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 3. Apply
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

59) Trees of life that illustrate the phylogenetic relationships of all organisms were traditionally based on _____; newer methods for determining phylogeny rely on _____.

A) morphology; nucleic acid sequences
B) nucleic acid sequences; morphology
C) morphology; virology
D) morphology; nutritional requirements
E) nucleic acid sequences; microbiomes

Question Details
Learning Outcome : 01.17 Explain the difference between traditional and molecular approaches to taxon
ASM Topic : Module 01 Evolution
ASM Objective : 01.05 The evolutionary relatedness of organisms is best reflected in phylogenetic tre
Bloom's : 2. Understand
Section : 01.07
Topic : Taxonomy of Microorganisms
Accessibility : Keyboard Navigation

Microbiology Systems Approach 6th Edition by Kelly CH01

Answer Key

Test name: CH01

1) TRUE
2) TRUE
3) TRUE
4) TRUE
5) TRUE
6) FALSE
7) D
8) A
9) D
10) A
11) C
12) A
13) A
14) A
15) A
16) A
17) A
18) A
19) B
20) C
21) B
22) D
23) A
24) B
25) C
26) E

27) A
28) B
29) B
30) E
31) A
32) C
33) B
34) A
35) C
36) A
37) B
38) E

Refer to the text and read about the recent discoveries that have had a huge impact on the understanding of microbiology.

39) A
40) A
41) D
42) D
43) A
44) C
45) D
46) B
47) A
48) C
49) B
50) B
51) A
52) B
53) E
54) D

55) B
56) C
Refer to "Systems of Presenting a Universal Tree of Life" for a discussion of the ssu rRNAs and their role in taxonomy.
57) D
58) A
59) A