Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

SKU: 9781264585557-TEST-BANK

Correct answers located at the end of the chapter.

1) A scientist studying helminths is working with bacteria.
   - ◎ true
   - ◎ false

2) Current evidence indicates that bacteria and archaea existed on earth for approximately 2 billion years before eukaryotes appeared.
   - ◎ true
   - ◎ false

3) A scientific theory, like the theory of evolution, is just our best guess at explaining a scientific phenomenon, but a theory cannot be considered fact.
   - ◎ true
   - ◎ false

4) Many chronic conditions are found to be associated with microbial agents.
   - ◎ true
   - ◎ false

5) All microorganisms are considered pathogens.
   - ◎ true
   - ◎ false

6) The term *sterile* means free of all life forms.
   - ◎ true
   - ◎ false

7) Members of the same species share many more characteristics compared to those shared by members of the same kingdom.
   - ◎ true
   - ◎ false

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

8) Once an organism is assigned to a particular taxonomic hierarchy, it is permanent and cannot be revised.
   - ◎ true
   - ◎ false

9) Viruses are not classified in any of Whittaker's five kingdoms.
   - ◎ true
   - ◎ false

10) The names of the three domains are: Bacteria, Protista, and Eukarya (Eukaryota).
   - ◎ true
   - ◎ false

11) One distinguishing characteristic of the archaebacteria is that they live in extreme environments.
   - ◎ true
   - ◎ false

12) Microbes have been found existing in salty, acidic lakes.
   - ◎ true
   - ◎ false

13) All proteins are enzymes.
   - ◎ true
   - ◎ false

14) The most important outcome of polypeptide intrachain bonding and folding is the unique shape of the protein.
   - ◎ true
   - ◎ false

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

15) Nucleic acids have primary, secondary, tertiary, and quaternary levels of organization.
- ◎ true
- ◎ false

16) If a hypothesis is accepted, then the findings become a scientific law.
- ◎ true
- ◎ false

17) The acceptance or rejection of a hypothesis is based on a series of educated guesses and opinions. Once the opinion is widely accepted it becomes a theory.
- ◎ true
- ◎ false

18) Despite the lack of a membrane-bound nucleus, bacteria and archaea are cells with a complex organizational structure.
- ◎ true
- ◎ false

19) Most microorganisms that are found in and on humans do not cause harm and can sometimes benefit the host.
- ◎ true
- ◎ false

20) The major groups of microorganisms studied by microbiologists include_____.
- A) bacteria
- B) plants
- C) helminths
- D) algae
- E) fungi
- F) viruses
- G) archaea
- H) protozoa

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

21) Select all answers that are roles played by microorganisms in our environment.
- A) Carry out photosynthesis
- B) Biological decomposition
- C) Nutrient recycling
- D) Complex relationships with animals but not plants

22) Select statements that apply to the theory of evolution to test your understanding of evolution.
- A) Has undergone years of testing
- B) Is a new untested hypothesis
- C) Has not been disproven
- D) Lacks supportive evidence
- E) Is a well-established natural phenomenon

23) Which of the following are correctly matched?
- A) Bacteria—no nucleus
- B) Bacteria—true nucleus
- C) Archaea—true nucleus
- D) Archaea—no nucleus
- E) Eukaryotes—true nucleus
- F) Eukaryotes—no nucleus

24) Select the main groups of macromolecules found in living things.
- A) Nucleic acids
- B) Oxygen
- C) Carbon dioxide
- D) Lipids
- E) Proteins
- F) Carbohydrates

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

25) Select the nitrogenous bases found in nucleotides that make up RNA.

A) Guanine
B) Uracil
C) Thymine
D) Adenine
E) Cytosine

26) Select the nitrogenous bases found in nucleotides that make up DNA.

A) Guanine
B) Uracil
C) Thymine
D) Adenine
E) Cytosine

27) Select characteristics exhibited by all cells.

A) Cytoplasmic membrane
B) Nucleus
C) DNA
D) Ribosomes
E) Cell wall
F) Organelles

28) Select all areas that comprise the main aspects of the science of taxonomy.

A) Classification
B) Genetics
C) Nomenclature
D) Analysis
E) Identification

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

29) Which of the following statements are true about the top ten causes of death?

A) COVID-19 is the only infectious disease responsible for a top ten cause of death in the United States.
B) COVID-19 is the only infectious disease responsible for a top ten cause of death worldwide.
C) Most of the top ten causes of death in the United States are the result of infection with a microorganism.
D) Worldwide, infectious diseases are responsible for several of the top ten causes of death.

30) When humans manipulate the genes of microorganisms, the process is called_____.

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

31) Which of the following is not considered a microorganism?

A) Mosquito
B) Protozoan
C) Bacterium
D) Virus
E) Fungus

32) 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

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

33) 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) Egyptians using moldy bread on wounds
D) *Escherichia coli* producing human insulin
E) Public health officials monitoring diseases in a community

34) Living things ordinarily too small to be seen with the unaided eye are termed_____.
A) bacteria
B) viruses
C) parasites
D) microorganisms
E) prokaryotes

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

36) Cells, like bacteria and archaea, that do not have a nucleus in their cells have traditionally been called_____.
A) decomposers
B) prokaryotes
C) pathogens
D) eukaryotes
E) fermenters

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

37) The first cells appeared about_____ billion years ago.

A) 5.2
B) 4.6
C) 3.8
D) 2.9
E) 1.5

38) Which of the following is not a human use of microorganisms?

A) Making bread
B) Treating water and sewage
C) Manufacturing copper wire
D) Mass producing antibiotics
E) Cleaning up oil spills

39) Using microbes to detoxify a site contaminated with heavy metals is an example of_____.

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

40) Disease-causing microorganisms are called_____.

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

41) The most prevalent worldwide infectious diseases are_____.

A) AIDS-related diseases
B) diarrheal diseases
C) malaria diseases
D) measles
E) respiratory diseases

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

42) 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

43) Helminths are_____.
A) bacteria
B) protozoa
C) molds
D) parasitic worms
E) infectious particles

44) Which group of microorganisms is composed only of hereditary material wrapped in a protein covering?
A) Viruses
B) Bacteria
C) Parasites
D) Fungi
E) Helminths

45) Which statement correctly compares the sizes of different microorganisms?
A) Bacteria are larger than viruses
B) Bacteria are larger than eukaryotic microorganisms
C) Eukaryotic microorganisms are smaller than viruses
D) Archaea are larger than eukaryotic microorganisms but smaller than bacteria

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

46) 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

47) 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

48) Sterility refers to_____.

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

49) 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

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

50) If you were a microbiologist in 1950, which of the following scientific principles would you already know?
A) Aseptic techniques could reduce the number of wound infections in the surgical setting.
B) Biofilms can form on implanted objects in the human body and be responsible for infection.
C) Enzymes found in bacteria can be used to cut DNA.
D) Very little DNA is transcribed into RNA that is then translated into proteins.

51) Taxonomy does not involve_____.
A) nomenclature
B) classification
C) taxa
D) identification
E) common name

52) Which scientific field is involved in the identification, classification, and naming of organisms?
A) Nomenclature
B) Taxonomy
C) Phylogeny
D) Woesean classification
E) None of the choices are correct.

53) The orderly arrangement of organisms into a hierarchy of taxa is called_____.
A) classification
B) identification
C) nomenclature
D) experimentation
E) biotechnology

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

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

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

55) The smallest and most significant taxon is_____.

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

56) Select the correct descending taxonomic hierarchy:

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

57) Which of the following is a scientific name?

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

58) 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

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

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

60) 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) None of the choices is correct.

61) 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

62) The scientist(s) who proposed organisms be assigned 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

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

63) Which scientific name is written correctly?

A) *Staphylococcus aureus*
B) *staphylococcus aureus*
C) *Staphylococcus Aureus*
D) Staphylococcus aureus
E) STAPHYLOCOCCUS AUREUS

64) Organic chemicals always have a basic framework of the element_____ bonded to other atoms.

A) carbon
B) nitrogen
C) oxygen
D) hydrogen
E) phosphorous

65) Most biochemical macromolecules are polymers, which are chains of_____.

A) hydrophobic molecules
B) electrolytic molecules
C) repeating monomers
D) repeating carbohydrates
E) hydrogen bonds

66) All of the following are monosaccharides except_____.

A) glucose
B) glycogen
C) fructose
D) ribose
E) deoxyribose

67) All of the following are polysaccharides except_____.

A) glycogen in liver and muscle
B) agar used to make solid culture media
C) a cell's glycocalyx
D) cellulose in certain cell walls
E) prostaglandins in inflammation

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

68) All of the following are lipids except_____.
A) cholesterol
B) starch
C) phospholipid
D) wax
E) triglyceride

69) What part of a phospholipid forms hydrophobic tails?
A) Fatty acids
B) Glycerol
C) Phosphate
D) Alcohol
E) All of the choices are correct.

70) A fat is called _____ if all carbons of the fatty acid chain are single bonded to two other carbons and two hydrogens.
A) unsaturated
B) polyunsaturated
C) monounsaturated
D) saturated
E) None of the choices are correct.

71) The lipid group that serves as energy storage molecules is_____.
A) prostaglandins
B) waxes
C) phospholipids
D) steroids
E) triglycerides

72) The lipid group that is the major component of cell membranes is the_____.
A) prostaglandins
B) waxes
C) phospholipids
D) steroids
E) triglycerides

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

73) The building blocks of an enzyme are_____.
A) nucleotides
B) glycerol and fatty acids
C) monosaccharides
D) phosphate, glycerol, and fatty acids
E) amino acids

74) Which is not true about enzymes?
A) They are found in all cells.
B) They are catalysts.
C) Their shape determines their function.
D) They can be denaturated by heat and other agents.
E) They have high-energy bonds between phosphates.

75) Which amino acid contains sulfur atoms that form covalent disulfide bonds in its tertiary structure?
A) Valine
B) Cysteine
C) Serine
D) Alanine
E) Tyrosine

76) What type of bonds are formed between adjacent amino acids?
A) Glycosilic
B) Ester
C) Peptide
D) Disulfide
E) Phosphate

77) The alpha helix is a type of_____ protein structure.
A) primary
B) secondary
C) tertiary
D) quaternary
E) None of the choices is correct.

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

78) One nucleotide contains_____.
A) one phosphate
B) one pentose sugar
C) one nitrogen base
D) All of the choices are correct
E) None of the choices are correct.

79) Which pertains to DNA but not to RNA?
A) Contains ribose
B) Contains adenine
C) Contains thymine
D) Contains uracil
E) Contains nucleotides

80) ATP is best described as_____.
A) an enzyme
B) a double helix
C) an electron carrier
D) the energy molecule of cells
E) All of the choices are correct.

81) You are trying to identify a chemical that consists of adenine, ribose, and three phosphates. What is this chemical?
A) DNA
B) RNA
C) ATP
D) Phospholipid

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

82) A student forgot to label a beaker containing a DNA solution and a beaker containing a glucose solution. If chemical analysis was performed to identify the contents of each beaker, which of the following would be found in the beaker of DNA but not in the beaker with glucose?

A) Amino acids
B) Hydrogen and oxygen atoms
C) Nitrogen and phosphorus
D) Fatty acids
E) Carbon atoms

83) Purines and pyrimidines are components in the building block units of all_____.

A) nucleic acids
B) carbohydrates
C) polysaccharides
D) amino acids
E) enzymes

84) Which of the following is not a pyrimidine?

A) Uracil
B) Adenine
C) Thymine
D) Cytosine
E) All of these are pyrimidines.

85) During protein synthesis,_____ RNA is made as a copy of a gene from DNA.

A) transfer
B) messenger
C) ribosomal
D) All of the choices are correct.

86) Characteristics shared by all cells include_____.

A) a membrane serving as a cell boundary
B) the possession of genetic information
C) the presence of cellular fluid
D) All of these choices are correct.

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

87) The purine_____ always binds with the pyrimidine_____ in DNA and RNA.
A) guanine; cytosine
B) cytosine; guanine
C) adenine; guanine
D) thymine; guanine

88) Which of the following statements is correct regarding the relationship between humans and microbes?
A) The majority of microorganisms that colonize humans are pathogenic
B) Microorganisms are benefited from their colonization of humans, whereas humans are unaffected by the relationship
C) Humans are colonized by bacteria and fungi, but not viruses
D) Not only do the majority of colonizing bacteria cause no harm to humans, the relationship is beneficial for both microbe and human host

89) Which list correctly ranks the microorganisms from largest to smallest?
A) Zika virus, *Bacillus anthracis*, *Aspergillis sp*., Helminth
B) *Aspergillis sp*., Zika virus,
Bacillus anthracis, Helminth
C) *Bacillus anthracis*, Helminth,
Aspergillis
sp., Zika virus
D) Helminth, *Aspergillis sp*., *Bacillus anthracis*, Zika virus
E) Helminth, *Aspergillis sp*., Zika virus, *Bacillus anthracis*

90) The Nobel Prize was awarded to Kary Mullis in 1993 for inventing what technique to amplify and subsequently analyze DNA?
A) Polymerase chain reaction
B) The central dogma of biology
C) Restriction enzyme analysis
D) Human microbiome project
E) Small RNA analysis

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

91) Which of the following statements correctly determines the process when following the scientific method?
A) Formulate question, conduct research, propose hypothesis, test hypothesis
B) Propose hypothesis, test hypothesis, formulate question, conduct research
C) Formulate question, propose hypothesis, test hypothesis, conduct research
D) Conduct research, formulate question, propose hypothesis, test hypothesis

92) Which of the features listed below is *not* found in all cells?
A) Cytoplasmic membrane
B) Ribosomes
C) DNA
D) Nucleus

93) Organisms were classified into kingdoms as they were defined. Which list reflects the order of discovery of the kingdoms as we know them today?
A) Monera, protista, fungi, plants and animals
B) Plants and animals, protista, monera, fungi
C) Fungi, monera, plants and animals, protista
D) Protista, fungi, monera, plants and animals
E) Monera, plants and animals, protista, fungi

94) Carl Woese and George Fox developed the three-domain system of taxonomy based on what molecular discovery?
A) Variations in the ribonucleic acid of the small ribosomal subunit of organisms
B) Mutations in enzyme proteins
C) Genetic analysis showing that bacteria and archaea are identical
D) Molecular analysis of genes showing that eukaryotes evolved from bacteria, and bacteria evolved from archaea

95) The term used to describe the broad field of science that involves human manipulation of microbes for use in industrial processes is_____.
A) biotechnology
B) bioremediation
C) recombinant DNA technology
D) biodegradation

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

96) The Dutch linen merchant_____ ground glass lenses to detailed specifications so that he was able to develop a microscope for observing and describing living microscopic animalcules.

A) Leeuwenhoek
B) Pasteur
C) Lister
D) Koch

97) Select the characteristic that is exhibited by viruses.

A) Viruses are independent living cellular organisms.
B) Viruses are much more complex than cells.
C) Viruses are composed of both DNA and RNA.
D) Viruses are parasitic particles that invade host cells.
E) Viruses lack a protein coat.

98) Alpha helices and beta pleated sheets are examples of_____ protein structure.

A) primary
B) secondary
C) tertiary
D) quaternary

99) Disulfide bonds are involved in maintaining_____ protein structure as well as the_____ level of protein structure exhibited by complex proteins such as antibodies.

A) tertiary; quaternary
B) quaternary; tertiary
C) secondary; quaternary
D) secondary; tertiary
E) primary; secondary

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

100) Choose the term that describes the formal system of identifying, arranging, and naming organisms.
A) Nomenclature
B) Identification
C) Classification
D) Taxonomy
E) Hierarchy

101) Which of the following choices is a correct way to denote the binomial name of a microorganism?
A) *Staphylococcus aureus*
B) *Staphylococcus Aureus*
C) *staphylococcus Aureus*
D) *staphylococcus aureus*
E) Staphylococcus aureus

102) Choose the statement or characteristic that best describes the Woese-Fox taxonomic system to test your understanding of taxonomy.
A) Three distinct cell lines called domains
B) Five kingdoms
C) Plants, animals, and microorganisms
D) Prokaryotes versus eukaryotes

103) When classifying organisms, early taxonomists did NOT rely on which of the following?
A) Analysis of the organism's shape (morphology)
B) Analysis of structural and organizational characteristics of the organism
C) Analysis of metabolic (nutritional) characteristics of the organism
D) Genetic analysis of the organism

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

104) Which of the following best describes the relatedness of members of the three domains?
A) Members of Domain Eukarya and Domain Archaea are the most closely related domains due to their genetic similarities in ribosomal RNA.
B) Members of Domain Eukarya and Domain Archaea are the most closely related domains because they both possess a nucleus to house their DNA.
C) Members of Domain Bacteria and Domain Archaea are the most closely related domains because neither possess a nucleus to house their DNA.
D) Members of Domain Bacteria and Domain Eukarya are the most closely related domains because they are common pathogens of humans.
E) Members of Domain Bacteria and Domain Archaea are the most closely related domains because they are all unicellular organisms.

105) You sample three sites in the microbiology lab room, including the doorknob, the whiteboard, and the lab bench. After incubation, growth appears on all three agar plates where the samples were inoculated. What best explains this finding?
A) Because microorganisms are ubiquitous, it is not surprising to find them in many different areas of the environment.
B) The lab must be poorly maintained by the custodial staff.
C) You must have failed to wear gloves when working with the samples from the environment.
D) It is common to find microorganisms in every area of the lab, but the results would likely be different if testing areas of the home.

106) NCLEX Prep - Test Bank Question: Please read the clinical scenario, and then answer the questions that follow to become familiar with the traditional NCLEX question format.

Ms. Smith is a 29-year-old patient at the outpatient psychiatric clinic. While completing her assessment you notice her hands are red, raw, and show signs of recent bleeding. She explains that she washes all her clothes in bleach, and uses the chemical to clean her hands several times a day. She states “I need to sterilize myself and my environment of all germs so I do not get sick.” While developing her nursing plan of care, you educate her about the importance of bacteria to the health and well being of not only humans, but also our planet.

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

106.1) Microorganisms have inhabited the Earth for billions of years, and can be found inhabiting a variety of environments. In fact, microbes performing anoxygenic photosynthesis led to the oxygenation of early Earth's atmosphere. These ancient organisms were _____.

A) bacteria
B) eukaryotes
C) viruses
D) prions

106.2) The RN applies therapeutic communication techniques to assess of Ms. Smith's understanding of the principle of sterility. Her statement of "I need to sterilize myself and my environment of all germs so I do not get sick" would be best followed by which of the following questions by the RN?

A) How does being in an unsterile environment make you feel?
B) Can you tell me more about what sterility means to you?
C) How does washing your hands with bleach make you sterile?
D) Can you tell me more about why you are afraid of germs?

106.3) As Ms. Smith progresses with her plan of care, the RN provides education regarding beneficial applications of microbes. Scientists use microbes to produce drugs, hormones, and enzymes. This type of biotechnology involves the transfer of foreign genetic material into a microbe, a process called_____.

A) recombinant DNA technology
B) gene therapy
C) bioremediation
D) polymerase chain reaction

107) NCLEX Prep - Test Bank Question: Please read the clinical scenario, and then answer the questions that follow to become familiar with the traditional NCLEX question format.

Wanda is a medical assistant and the newest employee of your healthcare team. You notice that she does not wash her hands in between patient visits. From your microbiology background, you understand that microbes are not visible with the naked eye. As the only nurse in your small medical office, you provide education for Wanda on the importance of hand washing.

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

107.1) Many microbes that inhabit the skin have the potential to cause disease. One such pathogen is *Staphylococcus aureus*. The genus name of this organism is most properly represented as_____.

A) *aureus*
B) *Staphylococcus*
C) *staphylococcus*
D) *Aureus*

107.2) Wanda is receptive to the nurse's teaching. In reinforcing the prevalence of microbes in our environment, the nurse describes the experiments of Louis Pasteur. Pasteur hypothesized that microbes were in the air and dust. Through experiments using swan-necked flasks, he disproved the concept of _____.

A) spontaneous mutation
B) spontaneous generation
C) aseptic theory
D) biogenesis

107.3) Hand washing in the healthcare environment is aimed at reducing the number of microbes in the medical setting to prevent the spread of infection and disease. Which of these terms best represents this technique?

A) Sterilization
B) Asepsis
C) Disinfection
D) Antisepsis

107.4) Viruses may also be transmitted to patients, even though they differ from bacteria in that they are_____.

A) parasitic invertebrate animals
B) infectious proteins
C) metabolically active eukaryotes
D) noncellular particles

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

108) NCLEX Prep - Test Bank Question: Please read the clinical scenario, and then answer the questions that follow to become familiar with the traditional NCLEX question format.

Breonna Jones is 16 years old, 5'4", and weighs 93 lb. She was admitted to an inpatient medical unit 2 days ago after collapsing at the local high school. Her parents knew she was skinny and had lost weight in the past few months, but had no idea that her life was in danger. The medical team has instituted treatment for anorexia nervosa. As you develop Breonna's nursing plan of care, you take into consideration the four major biological molecules that are building blocks of all cells.

108.1) The nurse implements an extensive nutrition education plan for Breonna, beginning at the molecular level. Carbohydrates, lipids, proteins, and nucleic acids are the four main families of biological molecules referred to as _____.

A) macromolecules
B) monosaccharides
C) polysaccharides
D) micromolecules

108.2) The structure of proteins is complex and unique, and only specific molecules can interact with their surface features. The natural shape of each protein is termed the native state. When proteins are exposed to heat, acid, or alcohol, their shape is disrupted and they become nonfunctional or_____.

A) digested
B) denatured
C) distorted
D) depolymerized

108.3) You inform Breonna that it is important for her to maintain a diet rich in carbohydrates, lipids, and proteins, so that each of these macromolecules can be metabolized to form a high-energy compound called_____.

A) cGMP
B) RNA
C) ATP
D) NAD

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

Answer Key

Test name: Chapter 01

1) FALSE
2) FALSE
3) FALSE
4) TRUE
5) FALSE
6) TRUE
7) TRUE
8) FALSE
9) TRUE
10) FALSE
11) TRUE
12) TRUE
13) FALSE
14) TRUE
15) FALSE
16) FALSE
17) FALSE
18) TRUE
19) TRUE
20) [A, C, D, E, F, G, H]
21) [A, B, C]
22) [A, C, E]
23) [A, D, E]
24) [A, D, E, F]
25) [A, B, D, E]
26) [A, C, D, E]
27) [A, C, D]
28) [A, C, E]
29) [A, D]
30) B
31) A
32) D
33) D
34) D
35) A
36) B
37) C

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

38) C
39) B
40) C
41) E
42) E
43) D
44) A
45) A
46) B
47) A
48) C
49) C
50) A
51) E
52) B
53) A
54) C
55) B
56) B
57) C
58) E
59) D
60) C
61) A
62) C
63) A
64) A
65) C
66) B
67) E
68) B
69) A
70) D
71) E
72) C
73) E
74) E
75) B
76) C
77) B

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

78) D
79) C
80) D
81) C
82) C
83) A
84) B
85) B
86) D
87) A
88) D
89) D
90) A
91) A
92) D
93) B
94) A
95) A
96) A
97) D
98) B
99) A
100) D
101) A
102) A
103) D
104) A
105) A
106) Section Break
106.1) A
106.2) B
106.3) A
107) Section Break
107.1) B
107.2) B
107.3) B
107.4) D
108) Section Break
108.1) A
108.2) B

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank

108.3) C

Microbiology Fundamentals - A Clinical Approach 2024 Release 1st edition Cowan Test Bank