

Chapter 1

Literature, Russian Literature



Chapter 1 1. The scientist usually considered the first to see microorganisms, which he called "animalcules", was A) Redi B) van Leeuwenhoek C) Pasteur D) Tyndall 2. The idea of Spontaneous Generation postulated that A) organisms could evolve into the next generation of organisms B) organisms could spontaneously combust C) organisms could spontaneously arise from other living organisms D) living organisms could spontaneously arise from non-living material 3. The work of Tyndall and Cohn A) supported the idea of spontaneous generation B) was used to explain why others investigating spontaneous generation had obtained results that were opposite of those obtained by Pasteur C) showed that microbes caused disease D) allowed scientists to see microorganisms 4. Microorganisms are involved in A) causing disease B) curing/treating disease C) preparing food D) cleaning up pollutants E) all of the choices are correct 5. Plants are dependent on microorganisms A) providing oxygen B) providing water C) changing atmospheric nitrogen to a usable form D) providing carbohydrates 6. Which is usually true of Bacteria? A) They are found as rods, spheres, or spirals B) They reproduce by binary fission C) They contain rigid cell walls made of peptidoglycan D) They are found as single cells E) All of the choices are correct 7. Which is not usually true of Archaea? A) They are found as rods, spheres, or spirals B) They reproduce by binary fission C) They contain rigid cell walls D) They are found as single cells E) They contain peptidoglycan as part of their cell walls 8. Outside a cell, viruses are A) running a small number of biochemical reactions B) synthesizing proteins necessary for entry into the host C) inactive D) constructing a cell membrane known as an envelope E) running a small number of biochemical reactions AND

synthesizing proteins necessary for entry into the host 9. Eucarya A) consist of only multicellular organisms B) have a more complex internal structure than Archaea or Bacteria C) have a simpler internal structure than Archaea or Bacteria D) have a membrane around the DNA E) have a more complex internal structure than Archaea or Bacteria AND have a membrane around the DNA 10. Organisms A) may be classified in four domains B) may be classified in three domains C) probably do not have a common ancestor D) have never shared genes between domains E) may be classified in three domains, probably do not have a common ancestor AND have never shared genes between domains Chapter 3 1. The two magnifying lenses found in a light microscope are the A) basic and transverse B) small and large C) ocular and objective D) simple and phase 2. The resolving power of a microscope is described as the ability of the microscope to A) separate clearly two objects that are very close together B) magnify an object C) separate the colors of an organism's internal structure D) see structures at various depths in a tissue 3. In viewing a microscopic specimen, oil is used to A) increase the refraction B) decrease the refraction C) increase the reflection D) increase the resolution E) decrease the refraction AND increase the resolution 4. Basic dyes A) have negative charges B) have positive charges C) are electrically neutral D) contain both positively and negatively charged particles 5. Which of the following stains is/are considered differential? A) flagella stain B) acid fast stain C) Gram stain D) acid fast stain AND Gram stain 6. The order of reagents in the Gram stain reaction are A) safranin, alcohol, methylene blue, iodine B) crystal violet, iodine, alcohol, safranin C) methylene blue, alcohol, safranin D) crystal violet, alcohol, iodine, safranin 7. The major criteria used

in placing bacteria into different groups is based on differences in A) cell wall structure B) cell membrane permeability C) presence or absence of flagella D) detergent susceptibility

8. Which term(s) refer(s) to bacterial morphology?
A) Bacillus B) coccus C) bacillus D) polyhedral E) coccus and bacillus

9. The cell wall of Gram-positive bacteria
A) contains a thin layer of peptidoglycan
B) contains a thick layer of peptidoglycan
C) is, due to its thickness, an excellent barrier to most molecules
D) contains an outer membrane containing LPS
E) contains a thin layer of peptidoglycan AND contains an outer membrane containing LPS

10. The cell wall of Gram-negative organisms
A) contains a thin layer of peptidoglycan
B) contains a thick layer of peptidoglycan
C) is, due to its thickness, an excellent barrier to most molecules
D) contains an outer membrane containing LPS
E) contains a thin layer of peptidoglycan AND contains an outer membrane containing LPS

Chapter 4

1. All the bacterial cells that result from the replication of a single organism are said to be a
A) population
B) pure culture
C) lag culture
D) mutant culture

2. The solidifying agent used most successfully in bacterial nutrient media is
A) gelatin
B) peptone
C) agar
D) starch

3. Prokaryotic cells divide by a process known as
A) conjugation
B) mitosis
C) binary fusion
D) binary fission

4. The simplest technique for isolating bacteria in growth media is referred to as the
A) pour plate method
B) streak plate method
C) serial dilution method
D) MPN method

5. In the growth curve of a bacteria population, the bacteria are rapidly increasing in number in the
A) lag phase
B) exponential (log) phase
C) stationary phase
D) decline phase
E) boomer phase

6. The optimal temperature for most human pathogens might be expected to range from
A) -5-15°C
B) 20-30°C
C) 30-40°C
D) 45-70°C

7.

Bacteria on fish caught in the Arctic Ocean would A) be psychrophiles B) be mesophiles C) thrive in a 37° incubator D) be psychotrophs 8. Organisms that require gaseous oxygen for metabolism are referred to as A) facultative aerobes B) obligate aerobes C) facultative aerobes D) microaerophiles 9. Organisms that use organic molecules as their source of carbon are called A) chemotrophs B) organoheterotrophs C) heterotrophs D) autotrophs 10. A medium that inhibits the growth of organisms other than the one being sought is termed a(n) A) synthetic medium B) specific culture medium C) selective medium D) enrichment medium Chapter 5 1. The process of killing or removing all the microorganisms in or on a material is termed A) sterilization. B) disinfection. C) sanitation. D) antisepsis. 2. Pasteurization A) is the use of heat to sterilize food products. B) is the use of heat to reduce pathogenic/spoilage bacteria to a safe level. C) is a process which uses intense cold to kill microorganisms on foods. D) is a process which uses short bursts of radiation to kill microorganisms on foods. 3. Plain soap is very effective in controlling spread of microorganisms because it is A) bacteriostatic. B) very effective at the mechanical removal of microorganisms. C) virucidal. D) bactericidal. 4. Moist heat kills microorganisms by A) irreversible coagulation of proteins. B) destruction of carbohydrates in the cell wall. C) denaturation of nucleic acids. D) dissolving the capsule. 5. Typical conditions used for sterilization are A) 100°C for 10 minutes. B) 121°C at 20 psi for 20 minutes. C) 80°C for 15 minutes. D) 72°C for 15 seconds. 6. The autoclave treatment may be monitored by A) heat-sensitive tape. B) heat-resistant endospores of *Geobacillus stearothermophilus*. C) pressure indicators alone. D) waiting for

contaminants to appear on freshly poured media. E) heat sensitive tape AND heat-resistant endospores of *Bacillus stearothermophilus*. 7. A common application of dry heat in the laboratory is to A) prepare specimens for study. B) sterilize media. C) sterilize plastics. D) sterilize the inoculating loop. 8. Ultraviolet radiation at the bactericidal wavelength destroy bacteria by A) destroying endospores. B) damaging nucleic acid. C) preventing spore formation. D) denaturing proteins. 9. Alcohols are not reliably effective at destroying A) vegetative bacteria. B) enveloped viruses. C) naked viruses. D) endospores. E) naked viruses AND endospores. 10. Which of the following is true of hydrogen peroxide? A) It is a sterilant for inanimate objects and is quickly inactivated on living tissue. B) It leaves a toxic residue. C) It is broken down by catalase into water and oxygen. D) It is a sterilant for inanimate objects and is quickly inactivated on living tissue AND it is broken down by catalase into water and oxygen

Chapter 7

1. The two strands of DNA are bonded to one another by A) covalent bonds B) oxygen bonds C) hydrogen bonds D) carbon bonds

2. Which pairing is incorrect? A) A: T B) G: C C) A: U D) A: G

3. RNA is characterized by A) deoxyribose B) thymine C) ribose D) double-stranded

4. The 3' end of DNA A) refers to the end that has a hydroxyl group attached to the number 3 carbon of deoxyribose. B) always has thymine attached to it. C) usually has guanine attached to it. D) attaches to the 5' phosphate group of the incoming nucleotide. E) refers to the end that has a hydroxyl group attached to the number 3 carbon of deoxyribose AND attaches to the 5' phosphate group of the incoming nucleotide.

5. DNA replication is A) conservative B) interspersive C) semiconservative D) chain reference

6. The term antiparallel A) refers to the structure single-stranded

RNA. B) is synonymous with semiconservative. C) refers to the opposite orientation of the two strands in DNA. D) refers to a type of prokaryotic replication.

7. How many nucleotides are in a codon? A) 1 B) 2 C) 3 D) 4 E) 5

8. There are _____ codons to code for the 20 possible amino acids. A) 20 B) 30 C) 64 D) 61

9. Which molecule carries an anticodon? A) DNA B) mRNA C) rRNA D) tRNA

10. The ribosomes A) move along the tRNA in a 3'-5' direction. B) move along the mRNA in a 5'-3' direction. C) move along the DNA in a 5'-3' direction. D) provide a platform which brings the amino acids into a favorable position for joining. E) move along the mRNA in a 5'-3' direction AND provide a platform which brings the amino acids into a favorable position for joining.

Chapter 8

1. The characteristics displayed by an organism in any given environment is its A) genotype. B) archaetype. C) mutatotype. D) phenotype.

2. Which would have the least effect on the amino acid sequence? A) substitution of 1 nucleotide B) deletion of 2 consecutive nucleotides C) addition of 1 nucleotide D) addition/deletion of 3 consecutive nucleotides E) substitution of 1 nucleotide AND addition of 1 nucleotide

3. Segments of DNA capable of moving from one area in the DNA to another are called A) base analogs. B) intercalating agents. C) transposons. D) palindromic sequences.

4. Irradiation of cells with ultraviolet light may cause A) 4 nucleotides to covalently bind together. B) thymine dimers. C) adenine complementary base pairing with cytosine. D) the addition of uracil.

5. Prokaryotic cell mutations can be observed very quickly because the prokaryotic chromosome is A) diploid. B) polyploid. C) haploid. D) polysomal.

6. Direct selection involves inoculating cells onto growth media on which A) the mutant but not the parental will grow. B) the mutation

will be reversed. C) the nutrients necessary for mutation to occur are present. D) the mutagen is present. 7. A clever technique that streamlines the identification of auxotrophic mutants is A) gas chromatography. B) replica plating. C) direct selection. D) reversion. 8. The mechanism by which genes are transferred into bacteria via viruses is called A) ellipsis. B) replica plating. C) transformation. D) transduction. E) conjugation. 9. Gene transfer that requires cell-to-cell contact is A) transformation. B) competency. C) conjugation. D) functional genomics. 10. The transfer of vancomycin resistance from *Enterococcus faecalis* to *Staphylococcus aureus* is thought to have involved A) conjugation. B) transformation. C) transduction. D) transposons. E) conjugation AND transposons. Chapter 13 1. Viruses that infect bacteria are referred to as A) viralcidens. B) bacteriocidins. C) bacterialogens. D) bacteriophages. 2. The protein coat of a virus A) is called a capsid. B) protects the nucleic acid. C) is involved in recognition of host cell receptors. D) is called a capsid, protects the nucleic acid AND is involved in recognition of host cell receptors. 3. Outside of living cells, viruses are A) scavenging glucose. B) slowly stockpiling ATP from the mitochondria. C) using cilia to move to the next host. D) metabolically inactive. 4. What part of the attached bacteriophage enters through the host cell wall? A) the entire virus B) only the enzymes necessary for replication C) the nucleic acid D) the nucleic acid and the capsid E) the capsid only 5. The correct order for the stages of a phage infection are: A) penetration, transcription, attachment, replication of nucleic acid and protein, assembly, release B) attachment, penetration, transcription, replication of nucleic acid and protein, assembly, release C) attachment, replication of nucleic acid and protein penetration,

transcription, assembly, release D) transcription, attachment replication of nucleic acid and protein, assembly, penetration, release 6. The phenomenon responsible for the ability of *Corynebacterium diphtherium* to produce the virulent toxin responsible for the devastating effects of diphtheria is called A) self-assembly. B) matrix conversion. C) prion protein. D) lysogenic conversion. 7. Enveloped viruses A) are metabolically active outside of a host. B) have an outer lipid bilayer membrane containing various proteins. C) are surrounded by an additional layer of carbohydrate. D) infect bacteria and archaea. 8. The term "segmented" refers to viruses that A) may contain several pieces of RNA. B) have an icosahedral-shaped capsid. C) are linked together before budding out. D) have an envelope. 9. The terms isometric, icosahedral and pleomorphic refer to A) viral life cycles. B) forms of nucleic acid. C) types of viral envelopes. D) shapes of viruses. 10. An infection in which the virus is continually present in the body is referred to as A) acute. B) balanced. C) determinant. D) persistent. Chapter 20 1. The arsenic compound that proved highly effective in treating syphilis was called A) penicillin. B) sulfa. C) erythromycin. D) Salvarsan. 2. Which person is credited with the discovery of Penicillin? A) Koch B) Hooke C) Flemming D) Ehrlich 3. One of the earliest antimicrobials isolated from a bacterium was A) penicillin. B) ampicillin. C) streptomycin. D) Salvarsan. 4. Drugs that are bacteriostatic A) kill bacteria. B) promote bacterial growth. C) inactivate bacterial spores. D) inhibit the growth of bacteria. 5. Antimicrobials that kill microorganisms have the suffix A) -cidal. B) -static. C) -anti. D) -genic. 6. Antibiotics that affect various strains of Gram-positive bacteria and various strains of Gram-negative bacteria are called A) isolate usable. B) stress-induced. C) narrow

spectrum. D) broad spectrum. 7. Drugs that are more effective when taken together are called A) energetic. B) antagonistic. C) subtractive. D) synergistic. 8. Which of the following drugs target peptidoglycan? A) penicillin B) cephalosporin C) vancomycin D) bacitracin E) All of the choices are correct. 9. All members of the penicillin family have A) beta-lactam rings. B) alpha-lactam rings. C) phenolic rings. D) sulfanilic rings. 10. Inhibitors of protein synthesis typically key on A) peptidoglycan precursors. B) penicillin binding proteins. C) ribosomes. D) porin proteins. Ch 14/15 Innate/Adaptive Immune System 1. Which is not a component of innate immunity? A) skin B) inflammation C) fever D) antibody 2. Skin and mucous membranes A) are the first line of innate immunity. B) are the first line of adaptive immunity. C) act as physical barriers to infection. D) contain antimicrobial secretions. E) are the first line of innate immunity, act as physical barriers to infection AND contain antimicrobial secretions. 3. Normal flora A) are the organisms that typically reside on your body. B) protect against infection by pathogens. C) enhance infection by pathogens. D) play no role in affecting pathogen growth. E) are the organisms that typically reside on your body AND protect against infection by pathogens. 4. In humans, the stem cells from which all blood cells arise are found in the A) peripheral circulation. B) lymphatic vessels. C) lymph nodes. D) bone marrow. 5. Complement A) may be activated through three pathways. B) disrupts the cytoplasmic membrane of invading bacteria and foreign cells. C) is part of the specific defense system. D) is a group of blood proteins. E) may be activated through three pathways, disrupts the cytoplasmic membrane of invading bacteria and foreign cells AND is a group of blood proteins. 6. Antibodies are made by A) red blood

cells. B) macrophages. C) B cells/plasma cells. D) T cells. 7. T cells primarily are responsible for A) humoral immunity. B) cell-mediated immunity. C) anamnestic immunity. D) producing haptens. 8. Epitopes or antigenic determinants A) are parts of the antibody molecule. B) are T cell receptors. C) are a portion of antigen recognized by antibody. D) may be approximately 10-25 amino acids in length. E) are a portion of antigen recognized by antibody AND may be approximately 10-25 amino acids in length. 9. Which of the following antibodies is a pentamer? A) IgA B) IgD C) IgM D) IgE 10. "Clonal selection" and "clonal expansion" A) implies that each individual lymphocyte produces a single antibody. B) describes how the adaptive immune system can produce millions of different antibodies. C) depends on an antibody recognizing a specific epitope. D) are based on random processes. E) All of the above

Ch 17 Immunological Disorders

1. During a Type I hypersensitivity reaction, the mast cells A) become phagocytic. B) release IgE antibodies. C) degranulate. D) immediately release histamine. E) degranulate AND immediately release histamine. 2. Generalized anaphylaxis is generally characterized by A) wheal and flare. B) inflammation. C) shock. D) rash. 3. Desensitization A) stimulates an increase in IgG. B) reduces the number of mast cells. C) increases the number of basophil cells. D) is a treatment for hypersensitivity reactions. E) stimulates an increase in IgG AND is a treatment for hypersensitivity reactions. 4. Anti-A and anti-B antibodies A) are considered natural antibodies. B) are present at birth. C) are typically IgM. D) easily cross the placenta. E) are considered natural antibodies AND are typically IgM. 5. Graft-versus-host disease is primarily a A) Type I reaction. B) Type II reaction. C) Type III reaction. D) Type IV

reaction. E) Type V reaction. 6. Delayed type hypersensitivity primarily involves A) erythrocytes. B) B cells. C) T cells. D) mast cells. 7. The cell type responsible for Type II hypersensitivity is the A) mast cell. B) B cell. C) macrophage. D) platelet. E) neutrophils. 8. Which of the following primary immunodeficiencies is the most common? A) severe combined immunodeficiency B) selective IgA deficiency C) agammaglobulinemia D) Di George's syndrome 9. If the body recognizes parts of itself as being foreign, this is termed A) immunodeficiency disease. B) agammaglobulinemia. C) autoimmune disease. D) AIDS. 10. Stem cells A) have an almost unlimited capacity to divide. B) can differentiate into different tissues. C) may be used to test the effects of drugs on human cells. D) come from fetal material. E) All of the above

Ch 18 Applications of Immune Responses 1. The practice of deliberately stimulating the immune system is called A) acquired immunity. B) memory immunity. C) vaccination. D) hypersensitivity. 2. Almost all of the antibodies found in a newborn are A) the result of infection. B) self-made. C) IgM. D) the result of passive immunity. 3. Which antibodies cross the placenta and protect the fetus? A) IgA B) IgG C) IgM D) IgD 4. Attenuated agents A) may induce immunity after a single dose. B) may cause disease in immunocompromised individuals. C) multiply in the body. D) may revert or mutate to disease-causing strains. E) All of the choices are correct. 5. Substances that are contained in vaccines to help induce a better immune response are called A) primary substances. B) secondary substances. C) adjuvants. D) adjuncts. 6. Monoclonal antibodies A) are usually of different classes. B) usually recognize several epitopes. C) have the same variable regions. D) are always IgE. 7. Monoclonal antibodies may be used in the

rapid diagnosis of A) pregnancy. B) hepatitis. C) influenza. D) chlamydia. E) All of the choices are correct. 8. An immune complex is defined as A) antigen combined with antigen. B) antigen combined with antibody. C) antibody combined with antibody. D) complement combined with LPS. 9. The serology test that may show the antigen-antibody complex as yellow-green under the microscope while using an ultraviolet light is known as the A) radioimmunoassay. B) fluorescent antibody test. C) ELISA test. D) AIDS test. 10. Immunodiffusion tests A) allow detection of specific antigens. B) are a simple method that produces visible results in the zone of optimal proportion. C) allow quantitation of antigen concentrations. D) All of the choices are correct. Ch 19 Epidemiology 1. Diseases that can be transmitted from one person to another are termed A) symptomatic. B) clinical. C) acute. D) latent. E) communicable. 2. The natural habitat of a pathogen is referred to as its A) home. B) primary inhabitation. C) infectious site. D) reservoir. 3. The fraction of a population who die from a specific disease is called A) mortality rate. B) morbidity rate. C) attack rate. D) incidence rate. 4. Which of the following is called a zoonotic disease? A) measles B) typhoid C) common cold D) plague 5. Vertical transmission involves A) droplet transmission. B) fomites. C) pasteurization. D) pregnant woman to fetus. 6. Inanimate objects capable of transferring infectious disease agents are A) vectors. B) fomites. C) vehicles. D) reservoirs. 7. The period of time between exposure to an agent and the onset of disease signs and symptoms is called the A) prodromal phase. B) decline phase. C) incubation period. D) lag phase. 8. When an infectious disease cannot spread in a population because it lacks a significant number of susceptible hosts, the phenomenon is referred to as

A) protected population. B) active immunity. C) passive immunity. D) herd immunity. 9. The type of epidemiological study that determines the characteristics of the persons involved and the time and place of the outbreak is called a(n) A) inspection study B) descriptive study. C) cohortive study. D) retrospective study. 10. If the number of people who become ill during an epidemic rises gradually, this is called a(n) A) propagated epidemic B) promulgated epidemic. C) common source epidemic. D) index epidemic.

Chapter 24 1. Collections of bacteria that adhere to the surfaces of the teeth are called A) dental caries. B) dental plaque. C) halitosis. D) periodontal disease. 2. Part of the ability of *S. mutans* to produce dental caries depends on its ability to A) invade plaque and dissolve the gums. B) convert sucrose to lactic acid. C) convert proteins to sugars. D) attach to the gums. 3. *H. pylori* is, in part, able to survive in the stomach by its ability to produce A) lactic acid from sugar. B) fatty acids from sebum. C) neutralizing proteins from glucans. D) ammonia from urea. 4. Where in the body does the latent, non-infectious, non-replicating form of the herpes simplex virus persist? A) motor neurons B) red blood cells C) cranial nerves D) sensory nerves 5. Mumps is a good candidate for elimination from the population due to A) the existence of an effective vaccine. B) a human only reservoir. C) the absence of a latent state. D) a single serotype. E) All of the choices are correct. 6. The initial attachment required for establishment of an intestinal infection is by A) flagella. B) cilia. C) pseudopodia. D) pili. 7. The toxins involved in intestinal infections typically A) kill cells by inhibiting protein synthesis. B) modify cell physiology resulting in increased secretion of water and electrolytes. C) modify cell physiology resulting in decreased secretion of water and

electrolytes. D) kill cells by inhibiting DNA synthesis. E) kill cells by inhibiting protein synthesis AND modify cell physiology resulting in increased secretion of water and electrolytes. 8. The primary treatment for cholera is A) the administration of antibiotics. B) vaccination. C) by blood transfusion. D) simply rehydration. E) vaccination AND by blood transfusion. 9. Which of the following groups contain diarrhea-causing *E. coli*? A) enterotoxigenic B) enteroinvasive C) enteropathogenic D) enterohemorrhagic E) All of the choices are correct. 10. Viral gastroenteritis that affects people of all ages and usually lasts less than 3 days is caused by A) herpes. B) hepatitis B. C) norovirus. D) rotavirus. Chapter 25 *Treponema pallidum* A) is the organism that causes syphilis. B) is a spirochete. C) can be more easily viewed with dark-field illumination. D) has become less virulent over time. E) All of the above are correct. 2. The urinary tract above the bladder usually shows A) *E. coli*. B) *S. aureus*. C) *P. vulgaris*. D) no bacteria. E) *E. coli* AND *S. aureus*. 3. The normal flora of the genital tract of women is A) affected by estrogen levels. B) dependent on the activity of *Lactobacillus*. C) unchanging. D) typically composed of *E. coli*. E) affected by estrogen levels AND dependent on the activity of *Lactobacillus*. 4. Bacterial cystitis A) is a common nosocomial disease. B) is typically caused by *E. coli*. C) may occur through the use of a catheter. D) is unusual in men under 50. E) All of the choices are correct. 5. Leptospirosis is often contracted A) by eating infected animals. B) by eating contaminated vegetables. C) from contaminated animal urine. D) by the respiratory route. 6. Toxic shock syndrome A) is due to exotoxins produced by *S. pyogenes*. B) is due to exotoxins produced by *S. aureus*. C) may spread from person to person. D) has a very low rate of recurrence,

approximately 1%. E) is due to exotoxins produced by *S. pyogenes*. 7. Typically pathogenic *Neisseria gonorrhoeae* A) secretes transferrin. B) destroys IgA. C) destroys IgM. D) is very immunogenic. 8. Untreated gonorrhea in males may lead to A) sterility. B) urinary tract infections. C) prostatic abscesses. D) orchitis. E) All of the choices are correct. 9. Which of the following manifests itself in three clinical stages? A) gonorrhea B) syphilis C) trachoma D) non-gonococcal urethritis 10. Which of the following diseases may manifest themselves with painful genital ulcers? A) chancroid B) rubeola C) herpes D) leptospirosis E) chancroid AND leptospirosis Chapter 26 The nervous system typically A) is sterile. B) has a small number of normal flora. C) contains Gram-positive bacteria. D) contains a small number of viruses. 2. An infection of the membranes covering the brain is called A) encephalitis. B) meningitis. C) arachnitis. D) ventriculitis. 3. Which of the following agents travel up the nerves to penetrate the CNS? A) rabies B) herpes simplex C) tetanus toxin D) polio E) rabies, herpes simplex AND tetanus toxin 4. The leading cause of bacterial meningitis in adults is A) *Escherichia coli*. B) *Haemophilus influenzae*. C) *Streptococcus pneumoniae*. D) *Neisseria meningitidis*. 5. Epidemics of meningitis appear to involve A) *Streptococcus pneumoniae*. B) *Haemophilus influenzae*. C) *Neisseria meningitidis*. D) *Streptococcus pyogenes*. 6. Which is true of listeriosis? A) It is a foodborne disease. B) It may result in meningitis. C) It is usually asymptomatic in healthy people. D) It is caused by an organism that can grow at refrigerator temperatures. E) All of the choices are correct. 7. The only known human pathogen that preferentially attacks the peripheral nerves is A) *N. meningitidis*. B) polio virus. C) *E. coli*. D) *M. leprae*. 8. Which is true of the C.

botulinum toxin? A) It is heat-sensitive. B) It is a neurotoxin. C) It blocks nerve to muscle signal transmission. D) It is a two-part toxin. E) All of the choices are correct. 9. The poliomyelitis virus is in the picornavirus family in the subgroup A) adenoviruses. B) enteroviruses. C) arboviruses. D) dermatropic. 10. The early symptoms of rabies generally begin A) 1 day after viral entry. B) 1-2 months after viral entry. C) 6 months after viral entry. D) 1 year after viral entry. Chapter 27 1. The plague bacillus is known as A) Plasmodium vivax. B) Pneumocystis carinii. C) Streptococcus pyogenes. D) Yersinia pestis. 2. A visible red streak in an infected hand or foot is referred to as A) septicemia. B) bacteremia. C) lymphangitis. D) edema. 3. The most common agent(s) causing subacute bacterial endocarditis is/are A) Streptococcus pyogenes. B) Pseudomonas aeruginosa. C) normal skin or mouth flora. D) Escherichia coli. 4. The inflammatory effects of immune complexes lodged in the kidney is called A) renal phritis. B) rendema. C) glomerulonephritis. D) urethritis. 5. Which of the following is more likely to cause fatal septicemias? A) Gram-positive bacteria B) Gram-negative bacteria C) negative stained bacteria D) acid-fast stained bacteria 6. Enlargement of lymph nodes or spleen is often associated with A) tularemia. B) brucellosis. C) plague. D) gastritis. E) tularemia, brucellosis AND plague. 7. Traditionally the animal(s) associated with hosting Brucella is/are A) cattle. B) dogs. C) goats. D) pigs. E) All of the choices are correct. 8. The " Black Death" may also be known as A) tularemia. B) brucellosis. C) endocarditis. D) plague. 9. The major virulence factors of Yersinia pestis are carried on A) the chromosome. B) a plasmid. C) three separate plasmids D) nuclear

membrane. 10. The cause of infectious mononucleosis is A) varicella virus. B) Staphylococcus aureus. C) Epstein-Barr virus. D) Francisella tularensis.