Practice Questions – Chapters 5, 9, 10

Chapter 5

1. Host cells of viruses include  
   A. humans and other animals.  
   B. plants and fungi.  
   C. bacteria.  
   D. protozoa and algae.  
   E. All of the choices are correct.

2. Viruses  
   A. cannot be seen in a light microscope.  
   B. are prokaryotic.  
   C. contain 70S ribosomes.  
   D. undergo binary fission.  
   E. All of the choices are correct.

3. One of the principal capsid shapes is a 20-sided figure with 12 evenly spaced corners referred to as a/an ______ capsid.  
   A. spiked  
   B. complex  
   C. icosahedral  
   D. helical  
   E. buckeyball

4. A naked virus only has a/an  
   A. capsid.  
   B. capsomere.  
   C. nucleocapsid.  
   D. envelope.  
   E. antigenic surface.

5. The core of every virus particle always contains  
   A. DNA.  
   B. capsomeres.  
   C. enzymes.  
   D. DNA and RNA.  
   E. either DNA or RNA.

6. New, nonenveloped virus release occurs by  
   A. lysis.  
   B. budding.  
   C. exocytosis.  
   D. both lysis and budding.  
   E. both budding and exocytosis.

7. Creutzfeld-Jacob disease is  
   A. caused by a chronic latent virus.  
   B. initiated by an oncogenic virus.  
   C. caused by a viroid.  
   D. a spongiform encephalopathy of humans.  
   E. also called "mad cow disease."

8. Two noncellular agents, smaller than viruses, are the infectious proteins called _____ and the infectious RNA strands called ______.  
   A. prions, capsomeres  
   B. virions, prions  
   C. viroids, phages  
   D. prions, phages  
   E. prions, viroids

9. The bacteriophage multiplication cycle is similar to that of an animal virus with the exception of uncoating. Uncoating does not occur because  
   A. they utilize specific receptors on the bacterial surface to adsorb.  
   B. the viral nucleic acid penetrates the host after being injected through a rigid tube inserted through the bacterial cell membrane and wall.  
   C. the viral nucleic acid enters the host cell through transformation.  
   D. the virus is engulfed by the cell and enclosed in a vacuole via endocytosis.
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. Mrs. Hammond is a 79-year-old woman who has been a resident on your floor for the past 5 years. She has been complaining of pain, burning, and tingling on her left side. Today, you observe fluid-filled blisters wrapping around the left side of her torso in a single line. The physician diagnoses her with shingles and places her on contact precautions.

10. Mr. Hammond inquires how his wife contracted this viral infection, since she has not come in contact with anyone who has shingles. You recall from microbiology that varicella zoster virus can remain in a chronic latent state in a host by  
A. integrating into a bacteriophage.  
B. turning on oncogenes.  
C. attacking T cells.  
D. incorporating viral DNA into the host DNA.

Chapter 9

11. The process that destroys or removes all microorganisms including bacterial endospores on inanimate objects is  
A. disinfection. 
B. sterilization. 
C. antisepsis. 
D. sanitization. 
E. degermation.

12. The process of using a cleansing technique to mechanically remove and reduce microorganisms and debris to safe levels is  
A. disinfection. 
B. sterilization. 
C. antisepsis. 
D. sanitization. 
E. degermation.

13. The use of chemical agents directly on exposed body surfaces to destroy or inhibit vegetative pathogens is  
A. disinfection. 
B. sterilization. 
C. antisepsis. 
D. sanitization. 
E. ionization

14. The method of killing or removing vegetative microbial life forms from inanimate objects is termed  
A. antisepsis. 
B. disinfection. 
C. sterilization. 
D. decontamination. 
E. degerming.

15. Which of the following factors will influence the action of microbial agents?  
A. the number of microorganisms 
B. the kind of microorganisms 
C. temperature and pH 
D. mode and dosage of the agent 
E. All of these will influence the action.

16. Pasteurization  
A. kills all vegetative forms. 
B. reduces the number of vegetative forms. 
C. reduces the number of endospores. 
D. increases food nutrient value. 
E. None of the choices is correct.

17. HEPA filters are used to remove microbes from  
A. air. 
B. liquids. 
C. human tissues. 
D. medical instruments. 
E. All of the choices are correct.

18. _____ is a halogen used in gaseous and liquid form for large scale disinfection of drinking water and sewage.  
A. Iodine 
B. Chlorine 
C. Bromine 
D. Fluorine 
E. All of the choices are correct.
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. As an RN in a long-term care facility, you observe precautions to control and prevent the spread of infection.

19. As an RN, you diligently practice proper hand washing technique when your hands are visibly dirty. Which of the following terms appropriately describes the type of antimicrobial control provided by hand washing with soap and water?  
A. sterilization  
B. disinfection  
C. decontamination  
D. antisepsis

20. As an RN, you utilize an alcohol-based hand cleaner with friction rub when your hands are not visibly dirty. Which of the following terms appropriately describes the type of antimicrobial control provided by alcohol-based hand cleaners?  
A. sterilization  
B. disinfection  
C. decontamination  
D. antisepsis

Chapter 10

21. The use of any chemical in the treatment, relief, or prophylaxis of a disease is called  
A. prophylaxis.  
B. chemotherapy.  
C. selective toxicity.  
D. nephrotoxicity.  
E. synergism.

22. Which antimicrobial directly inhibits cell wall synthesis?  
A. penicillin  
B. hydrogen peroxide  
C. UV radiation  
D. x-rays  
E. sodium flouride

23. Nutrients that encourage the growth of beneficial microbes in the intestines are known as  
A. prebiotics.  
B. probiotics.  
C. lantibiotics.  
D. phytobiotics.  
E. riboswitches.

24. Drug susceptibility testing determines  
A. the patient's response to various antimicrobials.  
B. the pathogen's response to various antimicrobials.  
C. if normal flora will be affected by antimicrobials.  
D. if the drug is increasing to toxic levels in a patient.  
E. None of the choices is correct.

25. Which therapeutic index value would be the drug of choice?  
A. 20  
B. 10  
C. 1  
D. 0.1  
E. Any value would be equally effective.
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. A 12-year-old male is admitted to the pediatric unit due to persistent upper respiratory symptoms and respiratory distress. The patient has a history of developmental delay, chronic lung disease, and frequent respiratory infections. Upon assessment, as the RN, you note the patient to have a fever, moderate respiratory rate, productive cough, and large amount of nasal secretions. Upon report from the patient’s mother, the patient has been on a 3-week course of antibiotics with no improvement in symptoms. Upon further work-up, the patient is diagnosed with bacterial pneumonia and methicillin-resistant *Staphylococcus aureus* (MRSA) superinfection.

26. You provide education to the patient and his mother regarding the diagnosis. Which of the following statements, by the mother, demonstrates an understanding of the teaching? 
   A. "My son has an extremely resistant form of MRSA causing his prolonged illness."  
   B. "My son developed simultaneous bacterial infections."  
   C. "My son developed a MRSA superinfection, following suppression of normal resident species in his lungs due to his initial infection."  
   D. "My son has pneumonia caused by a virus."

27. Based upon the patient’s history, what is the most likely cause of the superinfection?  
   A. poor hygiene  
   B. **long-term antibiotic therapy**  
   C. fecal-oral contamination  
   D. community-acquired MRSA

28. The use of which of the following drugs results in the highest risk of superinfection in a treated patient?  
   A. broad-spectrum antibiotics  
   B. narrow-spectrum antibiotics  
   C. topical antibiotics  
   D. antivirals

29. Treatment of urinary tract infections often leads to a superinfection caused by which microbe?  
   A. *Giardia lamblia*  
   B. *Lactobacillus acidophilus*  
   C. *Escherichia coli*  
   D. *Candida albicans*

NCLEX Prep - Test Bank Question: As an RN in a medical intensive care unit, you are participating in a research study regarding administration of probiotics to critically ill patients receiving antibiotic therapy. You provide education as part of the consent process to patients, families, and other staff members.

30. Following the teaching to patients and families, you assess understanding of the teaching prior to obtaining consent. **All of the following are accurate statements** by a patient regarding probiotics, except probiotics are live microorganisms. **B. are nutrients to encourage microbe growth.**  
   C. augment the microbes in the intestine.  
   D. can replace microbes killed during antibiotic therapy.