Microbial Diseases of the Skin

1. Describe a skin infection caused by a *Staphylococcus aureus* infection and a skin disease infection by a *Streptococcus pyogenes*.

2. What are comedos? What is the etiologic agent for inflammatory acne? Describe how acne develops, and what treatment options can be used to combat it.

3. Name and describe the four different types of skin lesions that can help to diagnose diseases. Provide examples of diseases for each type of lesion.
4. What is the etiologic agent for warts? Describe the transmission of warts. What treatment options are available?

5. Describe the etiology of Chicken pox and Shingles. What other names are these diseases known by? In an unvaccinated individual describe how they would contract chicken pox. Describe the pathology. In the same individual (at some point later in life) describe how they would contract shingles. Describe the signs and symptoms of shingles.

6. Name the microorganism responsible for measles. How is measles transmitted and how does the disease present itself? Describe the complications that can arise from measles. How is measles prevented?

7. What is the etiologic agent for fever blisters? Describe how it persists as a latent infection, and what happens during the active phase of infection. Describe the complications that can arise from Herpes Simplex infections.
8. Name the microorganism responsible for rubella. How is rubella transmitted and how does the disease present itself? Why are pregnant women asked if they have had a rubella vaccination? How is rubella prevented?
Chapter 22 Microbial Diseases of the Nervous System

1. Name and describe the three layers of connective tissue membranes that cover and protect the central nervous system. What is the blood-brain barrier? Describe its' role in protecting the brain, and the problems this causes in treating bacterial forms of meningitis.

2. What are the signs and symptoms of meningitis? To diagnose meningitis where would you obtain a sample, and how are the 3 major causes of bacterial meningitis distinguished by Gram stain and cell morphology.

3. Name the organisms responsible for (a) tetanus and (b) botulism. Describe the transmission pathways of both. Explain the differences between the paralyses caused by tetanus and botulism. What is responsible for the paralysis? What are the preventative and post exposure treatments for tetanus and botulism?

4. Which organism causes Leprosy? What alternative name is used for leprosy? Describe the transmission of leprosy, and describe how the disease progresses in each of the two different forms of the disease. How contagious is leprosy?
5. Which organism is responsible for polio? Describe the transmission of polio. Explain how ingestion of the polio virus can lead to respiratory failure. Compare the two vaccines developed against polio.

6. Which organism is responsible for rabies? Describe the progression of the disease, and the two different forms of rabies. Describe preexposure and post exposure treatments for rabies.

7. Name four organisms responsible for the transmission of the rabies virus. What efforts have been made to control rabies that does NOT involve vaccination of humans? Why would rabies be a difficult disease to eradicate?

8. What are Arboviruses? Describe the transmission of arboviruses. Name three arboviruses, and describe the diseases they cause.
Chapter 23 Microbial Diseases of the Cardiovascular System

1. What is septicemia? Describe how infections by (a) Gram negative bacteria and (b) Gram positive bacteria can result in septic shock. How can the use of antibiotics contribute to septic shock?

2. What is endocarditis? Which organism is responsible for endocarditis? Describe how an endocarditis infection occurs.

3. What is the etiologic agent of tularemia? Describe the transmission of tularemia, and discuss the different mortality rates in relation to the portal of entry. Tularemia is one disease that has been of interest for the development (or defense against) biological weapons. Which form of the disease would make the most potent biological weapon?
4. What is the etiologic agent of anthrax? Describe the transmission of anthrax, and discuss the different mortality rates in relation to the portal of entry. Anthrax is one disease that has been of interest for the development (or defense against) biological weapons. Which form of the disease would make the most potent biological weapon?

5. Which organism is responsible for gas gangrene? What is the reservoir of infection? Describe the necessary conditions for the development of gangrene. Describe the pathogenicity of gangrene. What are the treatment options for a gangrene infection?

6. What is the etiologic agent of plague? Identify both the reservoir and the vector involved in transmission to humans. Discuss the different mortality rates in relation to the portal of entry. Describe the signs and symptoms of plague.

7. What is the etiologic agent of Lyme disease? Identify both the reservoir(s) and the vector involved in transmission to humans. Describe the transmission of Lyme disease. What are the signs and symptoms of Lyme disease?
8. Describe the epidemiology of Dengue.

9. What is the etiologic agent of toxoplasmosis? Which type of organism is it? Discuss the transmission pathways of toxoplasmosis. Why is owning a cat considered a risk during pregnancy?

10. Name and describe five microorganisms that can cross the placenta during pregnancy.
Capítulo 24 Enfermedades microbianas del aparato respiratorio

1. Compare the following infections: pharyngitis, laryngitis, tonsillitis, sinusitis, epiglottitis in terms of etiologic agents and symptoms.

2. Describe the symptoms of pneumonia. Where would you obtain a sample for clinical diagnosis? Name three different pneumonia causing bacteria and how a Gram stain could be used to distinguish them. Which pneumonia causing bacterium cannot be identified from a Gram stain?

3. What is the etiologic agent of whooping cough? Describe the transmission and pathogenesis of whooping cough. Describe the three stages of whooping cough. How did it gain the common name of whooping cough?

4. What is the most common cause of the infection known as otitis media? Among which demographic group is the disease most prevalent. Describe the symptoms of the disease. Evaluate the use of antibiotics to treat this condition.
5. Describe the etiologic agent of diphtheria? Describe the transmission, symptoms and pathogenesis of diphtheria. How is diphtheria prevented?

6. What is the most common cause of the common cold? What else can cause the common cold? Discuss the transmission of the common cold. Why is there no cure for the common cold? Why is there no vaccine for the common cold?

7. Identify and describe the etiologic agent of tuberculosis. Discuss the different transmission routes of tuberculosis. How many people have TB worldwide? Why is tuberculosis called tuberculosis? Describe the development of tuberculosis in an infected individual, when (a) immune system arrests disease development, and (b) the immune system fails.

8. What is the vaccine against TB? Discuss the effectiveness and utilization of the TB vaccine. How is TB diagnosed? List the reasons why someone may have a positive test result for TB.
9. Describe how of Legionella was discovered (and why it was given the name Legionella). Describe the epidemiology of legionellosis.

10. Describe the signs and symptoms of a influenza infection. Describe the difference between antigenic drift and antigenic shifts. Discuss the epidemiology of influenza. Why is it necessary to have an annual vaccination against the flu?

11. Identify and describe the organism is responsible for the flu. Explain the system of naming types of influenza and strains (subtypes) of influenza viruses.

Chapter 25 Microbial Diseases of the Digestive System

Discuss the transmission, symptoms, and pathogenicity of Staphylococcal food poisoning. Which foods are high risk, and explain how food preparation can contribute to outbreaks.
Explain the difference between a bacterial intoxication and a bacterial infection of the gastrointestinal tract. Provide examples of each.

What is the commonest transmission route of gastro-intestinal infections? Discuss the factors that contribute to the transmission of food borne microbial diseases.

What is the etiologic agent of bacillary dysentery? Describe the signs and symptoms of bacillary dysentery. What is the incubation period and the ID$_{50}$, and describe the pathogenesis of bacillary dysentery. Compare and contrast amoebic dysentery and bacillary dysentery.

What is the etiologic agent of cholera? Describe the transmission and symptoms of cholera. What is the mortality rate and the ID$_{50}$? Which virulence factor is primarily responsible for the high mortality rate of cholera?

Describe the organism responsible for C.diff infections. Discuss the epidemiology and pathogenicity of $C$. $diff$. What can be done to limit the spread of this disease?
What is the etiologic agent of mumps? Describe the transmission of the mumps – which organs are infected during a mumps infection? Describe the symptoms of the mumps – and why is it a greater concern in adults than in children? How is mumps prevented?

Compare and contrast the five different Hepatitis viruses in terms of causative agent and transmission route. Which Hepatitis viruses have been linked to chronic liver disease? Which hepatitis viruses are preventable by vaccination?

Identify and describe are the etiologic agents (2) of stomach flu. Describe the transmission and epidemiology of stomach flu.

Name and describe the etiologic agents for amoebic dysentery and giardiasis. Compare and contrast transmission and symptoms of amoebic dysentery and giardiasis.