

STUDY GUIDE – FOUR

BIO 220 - MICROBIOLOGY

This Exam will cover chapters 12 - 15 in Tortora. As with previous exam it will be composed of a number of different question formats, including (but not limited to): short answer, essay, true/false, multiple choice, fill-in-the-blank, and drawing. This study guide is meant to aid you in your studying; **it is not an exhaustive list of possible questions, or topics that could be covered.** Please use this in conjunction with the notes you have taken and the lecture outlines I provide.

Chapter 12 – The Eukaryotes

1. Name the three major groups in the domain Eukarya or interest in pathogenic microbiology.
2. Why are eukaryotic pathogens typically more difficult to deal with in patients?
3. Define nosocomial infection.
4. Recognize and be able to define the major components of fungal anatomy (i.e. mycelium, hyphae, conidia, etc.)
5. Differentiate between the different types of fungi (molds, yeasts, etc.).
6. Define dimorphic fungi.
7. List the types of asexual spores that are produced by fungi.
8. List the nutritional adaptations that aid fungi in their survival.
9. Name the medically important phyla of fungi.
10. Differentiate Deuteromycota from the other phyla.
11. Define telomorph and anamorph.
12. Define mycosis and its inherent subclasses.
13. Define encystment.
14. Name the medically important phyla of protozoa.
15. Give an example for each of the above.
16. Describe the life cycle of the *Plasmodium* species (pictures alone will not suffice).
17. Describe the major phyla of the helminthes.

Chapter 13 – Viruses and Prions

1. Describe a virus in a functional definition.
2. Why are viruses not alive?
3. Define host range.
4. Define virion.
5. Describe the detailed structure of a virus.
6. Define capsid.
7. Name the major classes of viral morphology and draw an example of each.
8. Describe how viral taxonomy is determined.
9. Describe the animal viral multiplication cycle.
10. Describe the function of reverse transcriptase.
11. Define oncogene.
12. Define latent infection.

Chapter 13 – Viruses and Prions (cont.)

13. Define persistent viral infection.
14. Describe a prion.
15. Describe how prions kill, and why they are dangerous in the sense of contamination.

Chapter 14 – Etiology and Epidemiology

1. Define the following terms –

Pathology	Infection	Transient Microbiota
Etiology	Disease	Microbial Antagonism
Pathogenesis	Normal Microbiota	Opportunistic Pathogen
2. Describe the spectrum of symbiosis.
3. List Koch's Postulates.
4. Describe two reasons that a pathogen could not formally fulfill Koch's Postulates.
5. Differentiate sign, symptom, and syndrome.
6. Differentiate communicable, contagious, and noncommunicable disease.
7. Differentiate incidence and prevalence of a disease.
8. Differentiate sporadic, endemic, epidemic, and pandemic disease.
9. Differentiate acute, chronic, subacute, and latent disease.
10. List three predisposing factors for disease.
11. Describe the developmental cycle for disease.
12. Describe the three reservoirs of disease.
13. Differentiate among the methods for contact transmission of disease.
14. Define a vector and the two ways in which it can transmit disease.
15. Define vehicle transmission.
16. Define Emerging Infectious disease.
17. Define epidemiology.
18. Describe the three branches of epidemiology.
19. Define notifiable disease, morbidity rate, and mortality rate.

Chapter 15 – Pathogenesis

1. List the three main portals of entry into the host.
2. What is a preferred portal of entry?
3. Define ID₅₀ and LD₅₀.
4. Define adherence.
5. List three ways in which the pathogen can penetrate host defenses.
6. List three ways in which the pathogen can damage host cells.
7. Define toxin.
8. Differentiate between an exotoxin and an endotoxin.
9. Define siderophore.
10. Define cytopathic effects.