

Practice Questions for Test 3

Chapter 10

1. Draw out the Kingdom System and Domain System. How many branches does each have? Circle any branches containing eukaryotes.
2. Describe the method of “phage typing.”
3. Make a dichotomous key that can identify \$1, \$5, \$10, \$20 bills.
4. DNA sequencing belongs to what method of classification?
 - a. Morphology
 - b. Metabolism
 - c. Serology
 - d. Phage typing
 - e. Molecular Biology

Chapter 13

1. Draw an enveloped virus and label the nucleic acid, capsomere, membrane, and virus spikes.
2. Draw out the life cycle of bacteriophage. Explain the difference between lytic and lysogenic phases. Which phase would a bacteriophage want to be in if the host cell is in poor conditions?
3. Draw out the retroviral lifecycle. What are the functions of the enzymes: reverse transcriptase and integrase?
4. Which strand of a single-stranded RNA virus is translated directly?
5. Explain the three types of ways in which a virus can be cultured.
6. Is an oncogene or tumor suppressor overexpressed in cancer? How can a virus affect these genes?
7. Which of the following proteins is responsible for mad cow disease?
 - a. Capsomere
 - b. Polymerase
 - c. Oncogene
 - d. PrP^{SC}
 - e. PrP^C
8. What best defines a viroid?
 - a. Naked RNA
 - b. Histone bound DNA
 - c. Misfolded protein
 - d. Cancer causing virus
 - e. Retrovirus

Chapter 11

1. Describe the differences in goals of the ATCC and Bergey's Manuals.
2. Name the genus of the anthrax-causing species.
3. What genus is acid-fast and has tuberculosis-causing species?

4. What traits do *Pseudomonas* and *Escherichia* have in common?
5. Name the Archaea grouping of organisms that prefer very hot temperatures.
6. Which genus of organisms prefers high salt concentrations?
 - a. *Halobacterium*
 - b. *Pyrodictium*
 - c. *Rickettsia*
 - d. *Chlamydiae*
 - e. *Methanobacterium*
7. What genus belongs to the Archaea?
 - a. *Bacillus*
 - b. *Pseudomonas*
 - c. *Pyrodictium*
 - d. *Chlamydiae*
 - e. *Staphylococcus*
8. What proteobacteria grouping contains organisms that can grow in low nutrient conditions? Which one preys on other bacteria? Which are twisted?
 - a. Alpha
 - b. Beta
 - c. Gamma
 - d. Delta
 - e. Epsilon

Chapter 12

1. Review sexual and asexual lifecycles.
2. Name the three groups of protists and describe their general characteristics.
3. Draw out the life cycle of Zygomycetes.
4. What organism has a scolex?
5. Draw out the Plasmodium life cycle (the one that causes malaria). Identify all human organs and cells affected.
6. What worm can live both sexual and asexual life cycles in a single human?
7. What is the difference between an arachnid, insect, and crustacean?
8. This slime mold can produce sexual spores.
9. This is an example of an archaeozoan that can give you diarrhea?
 - a. *Entamoeba*
 - b. *Giardia*
 - c. *Rhizopus*
 - d. *Agaricus*
 - e. *Trichonella*
10. What kind of fungus makes conidia?
 - a. Ascomycete
 - b. Basidiomycete
 - c. Zygomycete
11. In the life cycle of a lung fluke, what acts as an intermediate host?
 - a. Human
 - b. Snail

- c. Pig
- d. Virus
- e. Dog

Chapters 7, 20

1. What is the difference between the disk diffusion method and dilution method in testing the effectiveness of an antimicrobial agent?
2. What are the three mechanisms of action of nonspecific chemical agents?
3. What are the five mechanisms of action for specific agents?
4. What chemical agent(s) act as oxidizing agents?
5. How does an autoclave sterilize?
6. How does sonication work?
7. Explain why stopping an antibiotic too early can contribute to antibiotic resistant bacteria.
8. Sulfa drugs mimic PABA, a precursor to folic acid. It is therefore a:
 - a. Antimetabolite
 - b. Cell wall inhibitor
 - c. Protein synthesis inhibitor
 - d. Detergent
 - e. Halogen
9. What is *not* a typical side effect of specific antimicrobial agents?
 - a. Toxicity
 - b. Allergy
 - c. Kills normal flora
 - d. Mutagen
10. Which of the following is a detergent?
 - a. Bleach
 - b. Acid
 - c. Soap
 - d. Hydrogen peroxide
 - e. Phenol