

**Microbiology 2730
Study Guide #12
Winter Semester 2008
E. Hoffman**

LABORATORY SECTION

ULTRA VIOLET LIGHT AND MUTATIONS

See textbook, Chapter 8

1. In this exercise, you used a very brief exposure to ultra violet light in an attempt to induce mutations in what bacterial species?
2. What was the specific mutation that you were attempting to induce?
3. Mutations, in general, involve changes in what molecule found in living cells?
4. More specifically, the changes involved in the above-mentioned molecule, really involve changes in the ___ sequence within that molecule.
5. Because of the above-mentioned changes (question #4), one normally expects to find changes in the ___ sequence within the protein molecule governed by the mutated gene. If one changes the sequence of these molecules, you normally expect to change the ability of the protein to ___ in the living cell.
6. Your textbook discusses POINT MUTATIONS. This type of mutation what type of change in the DNA molecule.
7. Your text separates point mutations into 2 subgroups or types. What are these types? You should be able to describe each type.
8. What is meant by the term, SILENT MUTATION? Note, this is another type of point mutation that is not discussed in your textbook but mentioned in class.
9. Generally speaking, what occurs in a FRAMESHIFT MUTATION?

LECTURE SECTION

Chapter 15

1. Some time was spent on the phagocyte based defense system that we possess. Who is the person given credit for introduction of the idea of Phagocytosis as a defensive mechanism (The Father of Phagocytosis)?
2. The above person based his concept on the study of how two different invertebrate animals reacted to foreign objects being placed into their body. One of these was the larval form of the ___ into which had been placed a plant ____. The other was ____, the water flea. In this case the invading microbe was a type of ____. If the animal's phagocytes couldn't handle the invader, the animal ___ and if they could, the animal ___.
3. The human circulatory system contains 5 major classes of leucocytes or ___ blood cells. What are their names? Which of these classes is the most numerous? Which of these groups destroys invading microbes primarily by the phagocytic route?
4. We have a group of phagocytic cells which are normally found outside the confines of the circulatory system proper. These cells constitute what is called the Mononuclear phagocytic system or ___ system. The components of this system can either ___ about or are anchored in place. Cite 3 areas of the body where you would expect to find anchored phagocytic cells.
5. You were introduced to 3 different kill mechanisms that phagocytes make use of. What were they?
6. Some time was spent describing the mechanism that mobile phagocytes use to locate invading microbes. These cells are said to be ___ in nature. What kinds of materials were noted in class, as playing a role in guiding phagocytes to where they need to be (the location of the microbes)
7. What is meant by the term, diapedesis?