Lab Final Study Guide- This is a study guide for informational purposes only. You do not need to write out answers. There NO EXTRA CREDIT associated with this study guide.

1. Know the names and functions of all the parts of the relevant microscope. Know the meaning of total magnification and how it is calculated. Know how to use and properly care for the microscope. I.e. how to focus a slide, make wet mounts and smears, how & when to use immersion oil etc.

2. Know how to aseptically transfer samples from one media to another. Know how to streak for isolation.

3. Be able to describe colony morphology using proper terminology.

4. Know how simple, gram’s, acid-fast, capsule and other stains are used to identify organisms in the lab. Know the basic steps involved in those which you performed in lab.

5. Know the purpose and process of using serial dilutions in the lab. Be able to use both “guesstimation” and plating and counting CFUs to determine the number of organisms in a sample. Know the equations used to calculate the original density in a sample. Also, know the equation for calculating generation time of microorganisms.

6. Know the difference between general and enriched media. Know the uses and basic characteristics of each of the following: PEA, MSA, EMB, BEA, Blood Agar, Citrate, Urease, TSA, Sabaroud (SDA), NA.*

7. Know the difference between selective and differential tests. Know the uses and characteristics of each of the following lab tests: oxidase, catalase, coagulase, phenol red broth (durham tubes), SIM.*

* for each of the media and tests listed above: know the reason for using the test, what it tests for (what chemicals) and what organisms is it usually used to ID. Know what a positive result looks like and what a negative result looks like.

8. Be able to describe the effects of UV on microbial growth. Be able to describe the Kirby-Bauer susceptibility test. Know what each of these is typically used for in a lab setting.