***Additional Exam Review***

1. Kingdom, Phylum, Class, Order, Family, Genus, Species
2. Eubacteria and Archaebacteria are both unicellular and prokaryotic. They differ in that Eubacterians have peptidoglycan in their cell walls, whereas Archaebacterians either do not have cells walls or do not have peptidoglycan in their cell walls.
3. A virus is mainly made up of a capsid (protein shell) and a piece of DNA (or RNA). Some, but not all, have an additional cell membrane.
4. The capsid helps the virus by 1) protecting the DNA from damage, and 2) Helping fool cells into thinking it’s “friendly” and this gaining entrance into a host cells that it can then force to make copies of the virus.
5. Viruses are classified by what they infect: either bacteria, plants or animals. They are currently not considered alive because they do not have all the characteristics of life (for example, they have no cells!). Should we want to include them as living organisms, we would need to modify our definition of “life”.
6. Viruses are dormant when they are present in cells but not actively reproducing and infecting new cells. This means the host does not show any signs of infection (no symptoms!).
7. Prokaryotes, or bacteria, exist in 3 main shapes: Cocci cells are round-shaped, Baccili cells are rod-shaped and Spirilla cells are spiral-shaped.
8. Viruses are not living organisms, Bacteria are! Bacteria are unicellular, Viruses have no cells!
9. Animal-like protists:
   1. Sarcodines: move using pseudopods
   2. Sporozoans: do not have a method of movement
   3. Ciliates: move using cilia
   4. Zooflagellates: move using flagella
10. Plant-like protists are classified first by their number of cells (unicellular or multicellular) and then by the pigments they contain (red, yellow/brown, green).
11. Slime molds have two stages to their life cycle: Feeding, during which time they are motile and feeding; and Reproduction, during which time they are sessile and reproducing.
12. Kingdom Fungi:
    1. Molds: No cells walls between cells of hyphae
    2. Sac Fungi: Sexual spores produced in small sacs
    3. Club Fungi: Sexual spores produced in club-shaped structures found on gills in the cap.
    4. Imperfect fungi: so not produce sexual spores at all!
13. Hyphae are long, unicellularly-thick strands used by fungi to grow and acquire nutrients from the environment. Without them, the fungi would neither get any bigger, nor would it gain any nutrients. It would die.
14. Endospores in bacteria are walls built inside the cell membrane to protect cells from a harsh environment. The spores of Kingdom fungi are cells produced and then liberated (released into the environment) for the purpose of reproduction. Though the words are similar, the structures are entirely different!