**Chapter 7 Test Study Guide**

1. Anton van Leeuwenhoek’s accomplishment
2. Magnification vs. resolution
3. 3 types of light microscopes and their descriptions
4. Ocular vs. objective lenses
5. How do you determine the total magnification?
6. What can fluorescent dye show in cells?
7. 3 types of electron microscopes and their descriptions
8. Light vs. electron microscopes
   1. What is used to view objects?
   2. Magnifying power
   3. Objects that can be viewed
   4. Advantages and disadvantages of both
9. Know the parts of the microscope
10. Robert Hooke
    1. What he studied
    2. Accomplishment
11. Definition of cell
12. Schleiden vs. Schwann
    1. What each studied
    2. Conclusions
    3. What did they help create?
13. Know the 3 parts of the cell theory
    1. Who does this theory apply to?
14. Definition of organelle
15. Prokaryotes vs. eukaryotes
    1. Size
    2. Examples
    3. What are the components?
    4. What does each have and/or not have?
16. Function of the nucleus
17. What is found inside the nucleus?
18. Definition of cell specialization
    1. Examples
19. Levels of organization
    1. Description of each level
    2. Examples of each level
20. What two organelles have their own set of DNA?
21. Endosymbiotic theory
    1. Who came up with it?
    2. What does the theory say?
22. Know the following organelles, their function, what they look like, and their nickname
    1. Cell wall
    2. Cell membrane
    3. Nucleus
    4. Nucleolus
    5. Vacuole
    6. Mitochondria
    7. Chloroplast
    8. Golgi apparatus
    9. Endoplasmic reticulum (rough vs. smooth)
    10. Ribosomes
    11. Cytoplasm
    12. Centrioles
    13. Cilia
    14. Flagella
    15. Lysosomes
    16. Cytoskeleton
23. What organelles are only in animal cells? Plant cells?
24. What substances can pass through the cell wall?
25. Know the organelles of a plant and animal cell