1st Semester Final Study Guide - *use the hardback science book to find the answers.*

1. Which part of a cell carries the genetic information during cell division? P152

2. The instructions for cell growth and development are found in the **\_\_\_\_\_\_\_\_\_\_\_.** P152

3. What is a main difference in mitosis between plant and animal cells? P154, figure #5

4. What happens during cytokinesis? P153

5. What is a **difference** between a prokaryotic cell and a eukaryotic cell? Provide an **example** for both of these cells. P118-119

6. The cell membrane is composed of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. P120-121

7**. Write** the formula for photosynthesis. **Circle** the three requirements that are needed for photosynthesis to occur? p148

8. What is the function of the mitochondria? p124

9. If there were a defect in a person’s mitochondria, how would this affect their body? P124

10. Describe the path that sound takes in the ear, starting with the outer ear to your brain. P538, paragraph #3

11. What is a benefit that multicellular organisms have by containing different types of cells that are *specialized* for different functions? P129 paragraph #3

12. List three advantages of being multicellular? P129

13. **Name** and **describe** the four levels of structural organization in the human body from simplest to most complex. P.130-131

14***. Draw*** and ***describe*** what happens during each step in cell division? P154-155 figure #4

15. What is the primary function of cell division? P152 paragraph #1

16. List the correct order of structures that light goes through from beginning to end in the eye. P536 paragraph #2

17. **Write** the **functions** for these structures of the eye - cornea, pupil, lens, retina, rods, cones and optic nerve. P536

18. Describe the difference between near sightedness, far sightedness and color blindness. P536

19. Describe the function of rods and cones in the eye. p536

20. What is light? P76

21. Which waves are humans able to see in the electromagnetic spectrum? P76

22. The eyes see color due to what property of light? P79

23. Why does a strawberry look red to you? P87 figure #7

24. Describe why white light that enters a prism, exits the prism as different colors? P91. Figure #3

25. ***Describe*** the differences between transparent, translucent and opaque. P87

26. What does illuminated mean? Provide **three examples** of illuminated objects. P84

27. How does light travel? P76

28. What direction does light travel? P82

29. **Describe**, **draw** and **labe**l the Law of Reflection. P82

30. **Draw** and **describe** the difference between regular reflection and diffuse reflection? P83

31. Which joints are used for walking?

32. **Describe** and provide **examples** of the ball and socket, hinge, pivot and gliding joints.

33.What is a lever?

34. **Draw, label** and **provide examples of** 1st, 2nd and 3rd class levers.

35. Provide **examples** in the human body of a 1st, 2nd and 3rd class levers.

36. **Draw** a picture of the human heart. **Labe**l the right and left atrium and the right and left ventricle.

37. Describe the **functions** of the right and left atria and the right ventricle and left ventricle.

38. Describe the **functions** of the heart valves, red blood cells and platelets.

39. What is the **function** of the following systems in the human body - skeletal, cardiovascular (circulatory), respiratory, lymphatic, reproductive and muscular systems.

40. List and describe a bone condition that results in brittle bones with low density.

41. **Draw** and **label** the male and female reproductive structures in a flower?

42. The sperm in a flowering plant is located in which structure?

43. When the human sperm and egg unite, a unique cell is formed called the \_\_\_\_\_\_\_.

44. In the reproductive system what is the function (purpose) of the fallopian tube, uterus and ovary?

45. Your naval (belly button) had which structure attached to it?

46. Oxygen passes through which structures in the Mother to the baby.