Study Guide for Quiz: (Some questions are repeats from Cell Membrane)

1. The FIRST Person to describe microscopic organisms and living cells was _____.

2. The maximum size to which a cell may grow is limited mainly by the cell's _____ _____.

3. Short, hair-like organelles that can move and may cover a unicellular organism or line the respiratory tract are called _____.

4. Some Ribosomes are free in the cytoplasm, while others line the membrane of the _____ _____ _____.

5. Everything between the cell membrane and the nucleus, is the cell's _____.

6. All cells, from all organisms, are surrounded by a _____ _____.

7. Membranes are _____ and have the consistency of vegetable oil.

8. The organelle that stores DNA and synthesizes RNA _____.

9. The organelle that processes and packages substances produced by the cell _____ _____.

10. The _____ is the control center of the cell.

11. The DNA in the form of a long strand is called _____.

12. Cytoplasm consists of two main components: _____ and _____.

13. The cell membrane functions like a _____, controlling what _____ and _____ the cell.

14. A lipid is a simple form of _____.

15. There are many kinds of _____ in cell membranes; they help to move material into and out of the cell.

16. Scientist call the modern view of the cell membrane structure the _____ _____ _____.

17. The nucleus is surrounded by a double layer membrane called the _____ _____.

18. During cell division, _____ strands coil and condense into thick structures called _____.

19. The nucleoli make _____. Which in turn build proteins.

20. Membranes are made mostly of _____ and _____.

21. The _____ is the smallest unit that can carry out all of the processes of life. The basic unit of life.

22. The maximum size to which a cell may grow is limited mainly by the cell's _____ _____.

23. The discovery of cells is linked most directly the development of the _____.

24. Organisms whose cells never contain a membrane bound nucleus are called _____.

24. Suspended in the cell's cytosol are tiny _____.

25. Cell membranes consist of two phospholipid layers called a _____.

26. The chromosomes in the nucleus contain coded _____ that control all cellular activity.

27. When a cell prepares to reproduce the _____ disappears.

28. Cytosol is a jelylike mixture that consists mostly of _____.

29. The nucleus is one _____.

30. In Eukaryotic cells, most organelles are surrounded by a _____.

31. Organisms whose cells always or usually contain a nucleus or nuclei are called _____.

32. _____ are structures that carry out specific functions in the cell.

33. Most cells have a single _____; some cells have more than one.

34. Unicellular organisms such as bacteria and their relatives are _____.

35. The Fluid Mosaic Model presents the modern view of a _____ _____.

36. The "Blueprints" in a Cell that controls all its activity are the _____.

37. Where are poisons and waste detoxified in a cell? _____ _____.

38. A cell synthesizes protein by using organelles called _____.

39. The Mitochondria of a cell contain an inner membrane called _____.

40. What are the membrane-bound sacs that package and secrete cell products? _____ _____.

41. Unlike animal cells, plant cells have _____ _____.

42. A Chloroplast can convert _____, _____, and _____ into _____.

43. What are Flagella? _____.

44. In animal cells, the Cytoskeleton maintains three-dimensional structure and helps the cell _____.

45. The organelle that digest molecules, old organelles, and foreign substances in the cell _____.

46. A pigment that absorbs energy in sunlight _____.

47. The organelle that prepares proteins for export and synthesizes steroids is _____ _____.

48. Ribosomes differ from most organelles because they have no _____.

49. What type of cells would you expect to find large numbers of mitochondria? _____ _____.

50. The "Powerhouse" of the cell _____.

51. Short, hairlike organelles that can move and may cover a unicellular organism or line the respiratory tract are called _____.

52. The first cells on Earth were likely _____ that did _____ make their own _____.

53. Microfilaments and microtubules function in cell _____ and _____.

54. What is the correct order of structures in living things, from simplest to the most complex? _____, _____, _____, _____.

55. The is the organelle that transfers energy in ATP _____.

56. What word means "Water Fearing"? _____.

57. What word means "Water Loving"? _____.

DIRECTIONS: Read Chapter 4, Structure and Function of the Cell and Answer the questions below as completely and as thoroughly as possible. Answer the question in essay form (not outline form), using complete sentences. You may use diagrams or pictures to supplement your answers, but a diagram or picture alone without appropriate discussion is inadequate. See me if you need Help, Have Problems or Questions or To Check Your Answers.

1. What are the THREE Parts of the Cell Theory?

2. Describe three differences between plant and animal cells.

3. Name TWO different kinds of animal cells, and describe how their shape is related to their function.

4. Explain the difference between a tissue and an organ.

5. Why is the cell membrane said to be selectively permeable?

6. If a cell has a high energy requirement, would you expect it to have many or few mitochondria? Explain your answer.

7. Describe TWO differences between prokaryotic cells and eukaryotic cells.

8. What is cell specialization? Give an example.

9. Distinguish between the structure of rough ER and that of smooth ER.

10. Explain how the nucleolus, ribosomes, endoplasmic reticulum, and Golgi apparatus function together in protein synthesis.

11. What are the major roles of the nucleus, and what parts of the nucleus carry out these roles?

12. What is a colonial organism, and what does it have in common with multicellular organisms?

13. How can you determine whether a unicellular organism is a prokaryote or a eukaryote?

14. Plant cells have cell walls, but animal cells do not. Why do you think that is so?

15. What is the difference between chromatin and chromosomes?

16. Describe the structure, composition, and function of the cell membrane.