**Reading Guide Packet: Ch 8: Cell Structure & Function**
Biology A

Name_____Period_____

**Ch 8.1: Life is Cellular**

1. What is the name of the man who coined the term “cells”? When did he do so?

2. Who was Anton van Leeuwenhoek? When did he do his work?

3. Define *cell*.

4. What does the Cell Theory state?

5. To what kinds of cells does the cell theory apply?

6. How do microscopes work?

7. What is the approximate maximum magnification of a light microscope?

8. What is the approximate scale of the smallest objects viewable by an electron microscope?

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9. What's the difference between *prokaryote* and *eukaryote* cells?

**Ch 8.2: Cell Structure**

10. What is *cytoplasm*?

11. What is an *organelle*?

12. What is the function of the nucleus?

13. What happens on ribosomes?

14. What kinds of proteins are made and modified on the rough ER?

15. What is the function of the Golgi apparatus?

16. What organelles store materials?

17. What organelles are the “cleanup crew”?

18. What is the function of the cytoskeleton?

19. What 2 organelles capture and release energy?

20. What kinds of cells have a cell wall?

21. What is the function of the cell membrane?

22. Define *selectively permeable*.

**Ch 8.3: Cell Transport**

23. What is *homeostasis*?

24. What is *passive transport*? What types of cell transport are passive?

25. How do particles move in the process of *diffusion*?

26. How is *facilitated diffusion* different from simple *diffusion*?

27. How is *osmosis* different from other types of *facilitated diffusion*?

28. Define:
    a. *Isotonic*

    b. *Hypertonic*

    c. *Hypotonic*

29. What is *osmotic pressure* driven by?

30. What is *active transport*?

31. How is *bulk transport* different from *molecular transport*?

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Biology A

**Ch 8.4: Homeostasis & Cells**

32. How do single-celled organisms maintain homeostasis?

33. How do cells in multicellular organisms differ from single-celled organisms?

34. List the levels of organization in multicellular organisms, from smallest to largest.

35. How do cells in multicellular organisms communicate?

36. What is a *receptor*?