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**Study Guide for Chapter 1: Cells-The Basic Units of Life & Chapter 2: The Cells in Action**

01. What are **three** main differences between an animal cell and a plant cell?

02. Put in sequence order:

**\_\_\_\_\_Anaphase \_\_\_\_\_Prophase \_\_\_\_\_Cytokinesis \_\_\_\_\_Interphase \_\_\_\_\_Telophase \_\_\_\_\_Metaphase**

03. What is the difference between **osmosis** & **diffusion**? Explain.

04. Things that have ALL the characteristics of life are called what?

05. **True or False:** Humans have over 100 trillion cells.

06. Put in sequence order (from smallest to largest):

**\_\_\_\_\_Tissues \_\_\_\_\_Organs \_\_\_\_\_Organism \_\_\_\_\_Cells \_\_\_\_\_Organ Systems**

07. All living things need six things for survival. Name three of them.

08. From the Latin word *cellula*, cell means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

09. The abbreviation for **deoxyribonucleic acid**, an organism’s genetic material (its blueprint) is found in cells is called what?

10. Most dividing human cells normally complete the cell cycle in about how long?

a.) 12 hours, b.) 24 hours c.) 36 hours d.) 48 hours

11. What are three examples of **fermentation**?

12. What cell organelle does **cellular respiration** occur in?

13. How many **chromosome**s does the average human have?

14. Are groups of similar types of cells that work together to carry out specific tasks; comes from Latin meaning “weave” and connective, muscle and nervous are examples.

15. Are groups of different tissues working together to perform a particular job; examples are heart, lungs and kidneys.

16. Are groups of different organs that work together to complete a series of tasks; examples are digestive, nervous and circulatory.

17. In biology, the smallest unit that can perform all life processes is called what?

a.) atom, b.) micro-organism c.) cell d.) droplet

18. **True or False:** The Cell Theory states that all living things are made of one or more cells and that all new cells come from preexisting cells.

19. A membrane-surrounded component (part) of a eukaryotic cell with a specialized function is called what?

20. What are the advantages and disadvantages of **multicellular organisms vs. unicellular organisms**?

22. Define **cellular respiration**.

23. Explain **photosynthesis** (use vocabulary words such as: **chloroplasts, carbon dioxide, oxygen, glucose (sugar) & energy (sun)** and draw a picture with arrows.

24. In a reaction that **eukaryotic** and **prokaryotic cells** can use to obtain energy levels from food when oxygen levels are low is called what?

25. A rod-shaped cellular structure made of condensed chromatin; contains DNA, which carries the genetic information that controls inherited traits are what?

26. How many stages of **mitosi**s are there?

a.) 1 b.) 2 c.) 3 d.) 4

27. Of all the stages of the cell cycle which one takes up the most time (90%)?

28. What is the **Cell Theory**? Explain all parts.