Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AP Bio: CHAPTER 6 THE CELL

1. The tool that lead to the understanding that cells are the basic unit of life was the...

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2. The smallest structures visible with the light microscope are the ....

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3. What is the advantage of the electron microscope?

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4. How do biologists isolate cell components? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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5. What are four things all cells have in common?

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. How do prokaryotic and eukaryotic cells differ? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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7. What is a limiting factor to cell size? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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8. How do ribosomes differ in prokaryotic and eukaryotic cells?

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9. Why is that difference important to us?

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10. What is the adaptive value of the endomembrane system?

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11. For each of the cellular structures, indicate a few significant aspects. Include major functions and structures.

|  |
| --- |
| Nuclear membrane |
| Nuclear pores |
| Nuclear lamina |
| Chromatin |
| Nucleolus |
| Ribosome |
| Smooth ER |
| Rough ER |
| Golgi apparatus |
| Lysosome |
| Vacuole |
| Mitochondria |
| Chloroplast |
| Perioxisome |
| Cytoskeleton |
| Microtubule |
| Microfilament |
| Intermediate filament |
| Extracellular matrix |
| Plasmodesmata |
| Tight junction |
| Desmosomes |
| Gap junctions |

12. Trace the path of production of a protein-based secretion from a secretory cell. (List the organelles involved)

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