RAVEN CHAPTER 4 GUIDED NOTES: CELL STRUCTURE

Raven 9th edition

1. What are the three features all cells have in common?

   a. _____

   b. _____

   c. _____

2. What are the three principles of the Cell Theory?

   a. _____

   b. _____

   c. _____

3. What is a limiting factor to cell size?

_____
_____
_____

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

_____

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

_____

6. What is the advantage of the electron microscope?

_____
_____

7. How do prokaryotic and eukaryotic cells differ?

_____
_____

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

Nuclear membrane

Nuclear pores

Chromatin

Nucleolus

Ribosome

Smooth ER

Rough ER

Golgi apparatus

Lysosome

Vacuole

Mitochondria

Chloroplast

Peroxisome

Cytoskeleton

Microtubule

Actin Microfilament

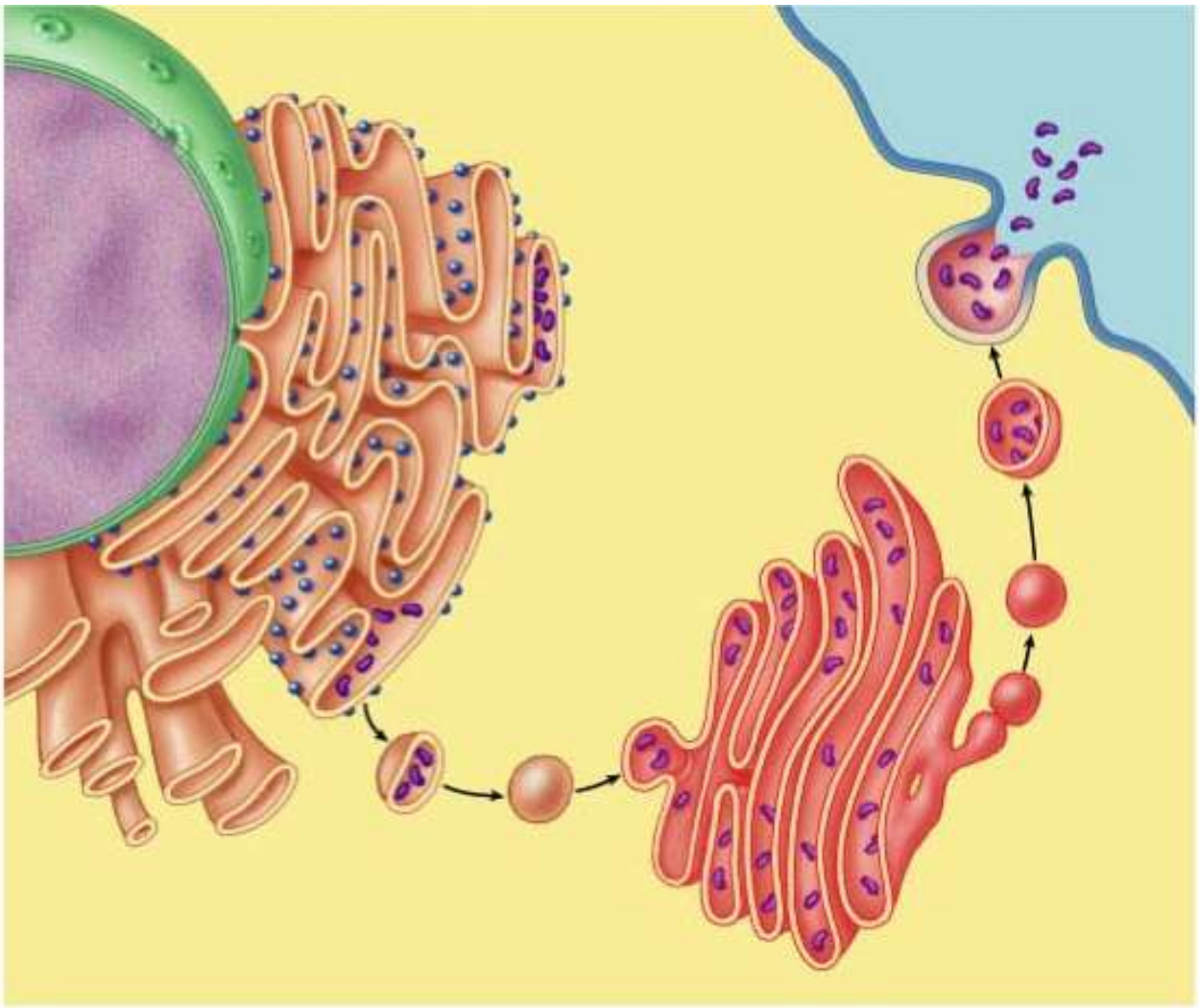
Intermediate filament

Centrioles

Extracellular
matrix

_____

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



10. Describe the Theory of Endosymbiosis and explain its relevance to eukaryotic cell structure.

_____
_____
_____
_____