

A. Multiple Choice

1. "All cells come from preexisting cell" is a tenet of the cell theory. Who among the following scientists coined this expression?
 - A. Matthias Schleiden
 - B. Robert Brown
 - C. Rudolf Virchow
 - D. Theodore Schwann

2. In which part of the cell does glycosylation and protein packaging occur?
 - A. Endoplasmic reticulum
 - B. Golgi apparatus
 - C. Ribosome
 - D. Vacuole

3. Which structures are involved in protein synthesis?
 - A. Cell membrane-ribosome-nucleus
 - B. Cell membrane-ribosome-nucleus-rough endoplasmic reticulum

5. The liver is involved in detoxification. Which organelle would you expect to be in abundance in the cells of the liver?
 - A. Golgi apparatus
 - C. Nucleus

B. Mitochondrion
D. Smooth endoplasmic reticulum

6. Which structure is common to both plant and bacteria but not in animal cells?

A. Nucleus
C. Cytoplasm
B. Cell wall
D. Ribosome

7. Which part of the cell houses the genetic information?

A. Endoplasmic reticulum
C. Nucleus
D. Vacuole

D. Lysosome-digestion

9. Which of the following is comprised of microtubules, microfilaments, and intermediate filaments?

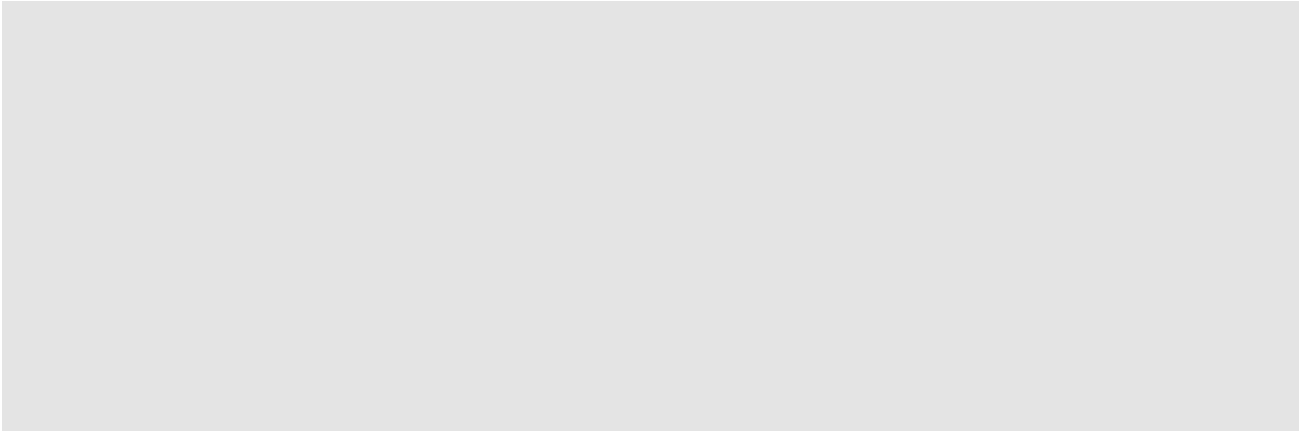
A. Cell wall
D. Endoplasmic reticulum
B. Cytoplasm
C. Cytoskeleton

10. Which organelle is not part of the endomembrane system?

A. Endoplasmic reticulum
C. Nucleus
D. Ribosome
B. Golgi apparatus

B. Answer the following briefly

1. How do prokaryotes perform certain metabolic functions like photosynthesis and cellular respiration despite the absence of membrane-bound organelle mitochondrion and chloroplast?



3. Early scientists studying the cell claim that plant cells do not possess lysosomes. Recent discoveries however show that plant cells have structures similar to the lysosomes of animal cells. Explain why early scientists thought that lysosomes are absent in plant cells, and that the recently discovered structure in plant cells is not exactly like the lysosomes in animal cells?

C. Performance-Based Assessment

Below is a list of diseases/disorders that are said to be linked with organelle defects or dysfunction.

1. Tay-Sachs Disease



5. Leigh's Syndrome

Each group will be assigned a disease/disorder to focus on. Search the internet for information about the disease/disorder assigned to you. Present in class the information that you have

- Defective organelle
- Management and care provided to patients

Make sure to explain the how the signs and symptoms of the disease/disorder are link to the defect in the organelle.