

Portage Learning BIOD 151 FINAL EXAM A&P 1

Question 1

5 / 5 pts

List two organs contained in the abdominal cavity.

Your Answer:

small intestine and large intestine

The abdominal cavity contains the stomach, intestines, spleen and liver

Question 2

5 / 5 pts

True or False?

- a. The purpose of cellular respiration is to produce ADP. (T or F)
- b. Peripheral proteins are found on the outer surface of a cell membrane. (T or F)
- c. Exocytosis is the process that occurs to bring biomacromolecules inside the cell. (T or F)
- d. Receptor-mediated endocytosis uses a signaling molecule from another cell, binding to the cell membrane to bring about changes within the cell proteins. (T or F)
- e. Endocytosis is a passive process. It does not require cellular energy expenditure. (T or F)

Your Answer:

- a. False
- b. True
- c. False
- d. True
- e. False

a. False- (ATP is produced, not ADP)

b. True

c. False- (This process is called endocytosis)

d. True

e. False- (Endocytosis is an active process and requires cellular energy)

Question 3

5 / 5 pts

Note: Essay answers must clearly be in your own words.

In your own words, discuss Tay-Sachs disease. What organelle within the cell is impacted? What are the symptoms of the disease and why do they occur?

Your Answer:

Tay-Sachs disease impacts the lysosome of the cell. This leads to a toxic buildup of toxins in the brain. This can lead to disability and death.

(1) Lysosomes

(2) buildup of toxic lipids inside the cell (biomacromolecules)

(3) disability and death

In the genetic disease known as Tay-Sachs, one of the normally present digestive enzymes inside lysosomes is lacking. Thus, a toxic lipid in the brain cells cannot be broken down. The resulting buildup of lipids in these cells can cause intellectual disability and death.

Question 4

5 / 5 pts

Note: Essay answers must clearly be in your own words.

You are observing two cells under the microscope. They are the same type of eukaryotic cell but one appears much larger. Based on appearance alone, which one would you expect to be carrying out respiration at a more active rate, the larger or smaller cell? Explain why.

Your Answer:

The smaller cell would carry out respiration at a more active rate. This is because of the increased surface area compared to larger cells.

The smaller cell. Cells need to remain relatively small because as a cell expands the amount of surface area relative to the volume of the cell decreases. The smaller cell is more active because relative to its volume, its surface area is larger than a bigger cell. With a larger surface area (relative to its volume) this allows the metabolic processes to occur faster.

Question 5

5 / 5 pts

Note: Essay answers must clearly be in your own words.