Quiz: Cellular Respiration

Read each question. Circle the letter of the correct answer.

1. A cell that requires a lot of energy might contain large numbers of _____.

A. vacuoles

B. lysosomes

C. mitochondria

D. chromosomes

2. Two products of the Krebs cycle are _____.

A. ATP and O_2

B. H_2O and CO_2

C. ATP and CO_2

D. ADP and H_2O

3. What process in the mitochondrion provides the electron transport chain in cellular respiration with the energy it needs to function?

A. glycolysis

B. chlorophyll

C. Krebs cycle

D. ATP synthase

4. What is the function of oxygen in cellular respiration?

A. to give a source of energy to the Krebs cycle

B. to provide oxygen for the production of carbon dioxide

C. to deliver hydrogen ions to the electron transport chain

D. to pick up electrons at the end of the electron transport chain

5. Which phrase best describes the main role of fermentation? Choose the correct answer.

A. allows anaerobic production of ADP

B. converts glucose into pyruvate and NADH

C. produces lactic acid to counteract an oxygen deficit

D. allows glycolysis to continue

6. What happens to the sugars that are made during photosynthesis?

A. They go back into the Calvin cycle.

B. They make ATP by bonding together.

C. They can be used for cellular respiration.

D. They move directly into an electron transport chain.

7. The part of cellular respiration that needs oxygen takes place inside the _____.

A. nucleus

B. thylakoid

C. cytoplasm

D. mitochondria

8. Which of these statements is true of ATP?

A. It stores energy as glucose.

B. It stores energy for cellular processes.

C. It converts sunlight into chemical energy.

D. It contains less stored energy than ADP.

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9. Complete this comparison statement.

photosynthesis : oxygen :_____:
_____

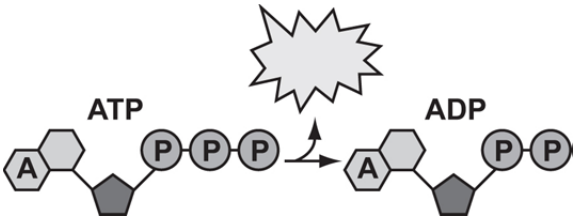
A. oxygen : carbon dioxide

B. cellular respiration : oxygen

C. cellular respiration : enzymes

D. cellular respiration : carbon dioxide

10. Which of the following does NOT occur in the Krebs cycle?



A. A 4-carbon molecule is recycled.

B. Glucose is broken down into two pyruvate molecules.

C. Pyruvate is broken down into a 2-carbon molecule and carbon dioxide.

D. Citric acid is broken down, creating carbon dioxide as a waste product.

Read each statement. Write your answer on the lines.

11. What is the difference between the energy source of chloroplasts and mitochondria?

What do the two organelles have in common?

12. What two inputs are needed for cellular respiration?

13. Where does glycolysis take place in a cell?

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14. Fermentation occurs in the cells of many organisms, including the cells of animals. Provide two examples that illustrate the importance of this anaerobic process in the world around us. In your answer, include the following information.

Provide an example of fermentation that occurs in human cells and explain why it is important.

Provide an example of fermentation that occurs in beneficial bacterial cells within animals and explain why it is important.

15. The relationship between photosynthesis and cellular respiration is usually described as a cycle. Explain briefly.

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