

Key

CELLULAR RESPIRATION

MULTIPLE CHOICE. Circle ALL that are TRUE. There may be MORE THAN one correct answer.

- _____ is the first step in cellular respiration that begins releasing energy stored in glucose.
A. Alcoholic fermentation
B. Lactic acid fermentation
C. Glycolysis
D. Electron transport chain
- The carriers for energy and high energy electrons resulting from glycolysis and the krebs cycle are _____.
A. ATP
B. NADH
C. FADH₂
D. NADPH
- If oxygen is NOT present, glucose is broken down by _____.
A. Krebs cycle
B. electron transport chain
C. fermentation (anaerobic respiration)
- Name the 3 carbon molecule produced when glucose is broken in half during glycolysis.
A. pyruvic acid
B. lactic acid
C. Acetyl-CoA
D. citric acid
- Since fermentation does not require oxygen it is said to be _____.
A. aerobic
B. anaerobic

6. Write the complete overall chemical equation for cellular respiration using words:

sugar + Oxygen → ATP + Carbon dioxide + water

7. Compare this reaction to PHOTOSYNTHESIS ($6 \text{ H}_2\text{O} + 6 \text{ CO}_2 + \text{light energy} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6 \text{ O}_2$)
How are these equations related?

opposites & dependent on each other

8. Write the equations in words for the two kind of fermentation:

Alcoholic fermentation

sugar → ethanol + ATP + CO₂

Lactic acid fermentation

sugar → ATP + lactic acid