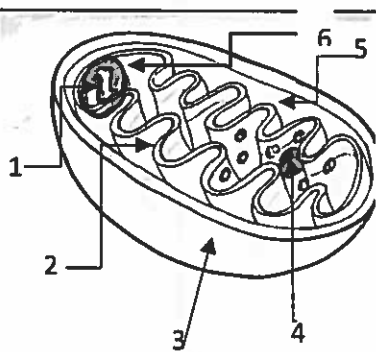


Unit 4 Biology Exam- Cellular Respiration – Version A

2b. Write the letter for the structure and the number of the function that it performs



- 1: _____
 2: _____
 3: _____
 4: _____
 5: _____
 6: _____

- A. Outer Membrane
- B. Intermembrane Space
- C. Inner Membrane
- D. Matrix
- E. Ribosome
- F. DNA

- 1. Important in synthesis of ATP
- 2. Fluid that contains enzymes for the Citric Acid Cycle
- 3. Folds into cristae to increase surface area
- 4. For synthesis of proteins
- 5. Creates its own, mitochondrial from mother
- 6. Separates the inside of organelle from the rest, determines what enters and leaves

2c. Must get all of the questions below correct to meet target.

1. Cellular Respiration converts:

- a) Glucose → ATP
- b) Light Energy → Glucose
- c) Carbon Dioxide → Oxygen
- d) ATP → NADPH

2. The Krebs Cycle converts:

- a) Pyruvate → CO₂
- b) Light Energy → Glucose
- c) Glucose → Pyruvate
- d) ATP → NADPH

3. What is the equation for cellular respiration?

- a) $CO_2 + H_2O \rightarrow C_6H_{12}O_6 + O_2 + ATP + Heat$
- b) $C_6H_{12}O_6 + O_2 \rightarrow CO_2 + H_2O + ATP + Heat$
- c) $C_6H_{12}O_6 \rightarrow Lactic\ acid + ATP + Heat$
- d) $C_6H_{12}O_6 \rightarrow CO_2 + Ethyl\ alcohol + ATP + Heat$

4. Glycolysis converts:

- a) Pyruvate → CO₂
- b) Light Energy → Glucose
- c) Glucose → 2 Pyruvate
- d) ATP → NADPH

5. The most abundant product formed by the ETC is:

- a) Pyruvate
- b) NADH
- c) H⁺ ions
- d) ATP

6. Glycolysis is ..

- a) Anaerobic
- b) Aerobic
- c) has H⁺ ions
- d) makes 32 ATP

2d. Short Answer, write in complete sentences and explain the questions.

7. Describe the phases of cellular respiration, and be sure to address the following with each:

- a. where it is happening
- b. Reactants
- c. Products
- d. anaerobic or aerobic

8. Why do all living things have to undergo cellular respiration.

9. Give an explanation of what happens to carbon as it cycles through cellular respiration

10. Matching: Match the letter to the number

- | | |
|-----------------------------------|-----------------------------------------------------------------------------|
| _____ 1. Glycolysis | a. how cells get energy from food without oxygen |
| _____ 2. NADH - | b. process without oxygen |
| _____ 3. Electron transport chain | c. breaking of glucose into two pyruvic acids |
| _____ 4. Fermentation - | d. process with oxygen |
| _____ 5. Anaerobic - | e. where high energy electron pump H ⁺ ions through the membrane |
| _____ 6. Aerobic - | f. electron and hydrogen carrier |