

# Quizizz

## Cellular Respiration & Enzymes (A)

Name : \_\_\_\_\_

Class : \_\_\_\_\_

Date : \_\_\_\_\_

1. What is one of the reactants of cellular respiration?

a) energy

b) glucose

c) carbon dioxide

d) water

2. \_\_\_\_\_ produces the most ATP.

a) photosynthesis

b) aerobic respiration

c) anaerobic respiration

d) glycolysis

3. What are the products of aerobic respiration?

a) Glucose and oxygen

b) Carbon dioxide and water

c) Lactic acid

d) Carbon monoxide

4. Aerobic respiration is different from anaerobic respiration in that aerobic respiration needs...

a) chlorophyll

b) carbon dioxide

c) glucose

d) oxygen

5. How many ATP are produced in aerobic respiration?

a) 2

b) 28

c) 4

d) 36

6. What is the correct equation for cellular respiration?

a)  $6O_2 + C_6H_{12}O_6 \rightarrow 6CO_2 + 6H_2O + Energy$

b)  $6O_2 + C_6H_{12}O_6 + Energy \rightarrow 6CO_2 + 6H_2O$

c)  $6CO_2 + 6H_2O \rightarrow 6O_2 + C_6H_{12}O_6 + Energy$

d)  $6CO_2 + 6H_2O + Energy \rightarrow 6O_2 + C_6H_{12}O_6$

7. Where does the Krebs Cycle take place?

a) Cristae

b) Matrix

c) cytoplasm

d) nucleus

8. Cellular Respiration's goal is to

a) make water

b) make ATP

c) make glucose

d) make oxygen

9. Anaerobic respiration.....

- |                          |                                    |                          |                             |
|--------------------------|------------------------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | a) doesn't require CO <sub>2</sub> | <input type="checkbox"/> | b) requires CO <sub>2</sub> |
| <input type="checkbox"/> | c) doesn't require oxygen          | <input type="checkbox"/> | d) requires oxygen          |

10. What is cellular respiration?

- |                          |   |                          |   |
|--------------------------|---|--------------------------|---|
| <input type="checkbox"/> | a) the breakdown of glucose to release ATP  | <input type="checkbox"/> | b) the breakdown of glucose to release NADH   |
| <input type="checkbox"/> | c) the breakdown of glucose to release FADH | <input type="checkbox"/> | d) the breakdown of glucose to release carbon |

11. Which molecule isn't an energy carrier?

- |                          |                      |                          |         |
|--------------------------|----------------------|--------------------------|---------|
| <input type="checkbox"/> | a) FADH <sub>2</sub> | <input type="checkbox"/> | b) NADH |
| <input type="checkbox"/> | c) oxygen            | <input type="checkbox"/> | d) ATP  |

12. Glycolysis results in a net gain of how many ATP?

- |                          |      |                          |      |
|--------------------------|------|--------------------------|------|
| <input type="checkbox"/> | a) 0 | <input type="checkbox"/> | b) 2 |
| <input type="checkbox"/> | c) 4 | <input type="checkbox"/> | d) 1 |

13. What is glucose converted to during glycolysis?

- |                          |                |                          |               |
|--------------------------|----------------|--------------------------|---------------|
| <input type="checkbox"/> | a) Acetyl-Co A | <input type="checkbox"/> | b) Coenzyme A |
| <input type="checkbox"/> | c) Pyruvate    | <input type="checkbox"/> | d) Sucrose    |

14. What comes next after glycolysis if oxygen is present

- |                          |                           |                          |                             |
|--------------------------|---------------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | a) Krebs cycle            | <input type="checkbox"/> | b) Electron transport chain |
| <input type="checkbox"/> | c) Alcoholic Fermentation | <input type="checkbox"/> | d) Lactic Acid Fermentation |

15. What is the purpose of photosynthesis?

- |                          |                 |                          |                           |
|--------------------------|-----------------|--------------------------|---------------------------|
| <input type="checkbox"/> | a) make glucose | <input type="checkbox"/> | b) make ATP               |
| <input type="checkbox"/> | c) make light   | <input type="checkbox"/> | d) release carbon dioxide |

16. Enzymes are made of what organic molecule?

- |                          |           |                          |                  |
|--------------------------|-----------|--------------------------|------------------|
| <input type="checkbox"/> | a) carbs  | <input type="checkbox"/> | b) protein       |
| <input type="checkbox"/> | c) lipids | <input type="checkbox"/> | d) nucleic acids |

17. How do enzymes affect reactions?

- |                          |  |                          |   |
|--------------------------|--|--------------------------|---|
| <input type="checkbox"/> | a) slow them down by raising activation energy     | <input type="checkbox"/> | b) slow them down by lowering the temperature |
| <input type="checkbox"/> | c) speed them up by lowering the activation energy | <input type="checkbox"/> | d) doesn't affect them in anyway              |

18. Which of the following is not a step in cellular respiration?

- a) Kreb's cycle  
 c) glycolysis

- b) calvin cycle  
 d) ETC

19. The part of an enzyme where the substrate binds

- a) active site  
 c) large subunit

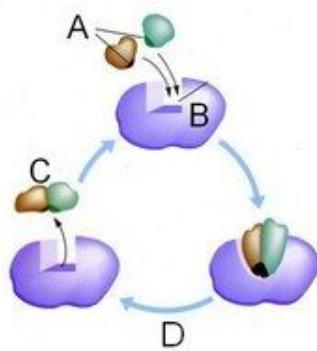
- b) catalyst  
 d) inhibitor

20. What is the body's main energy molecule?

- a) ADP  
 c) FADH

- b) NADH  
 d) ATP

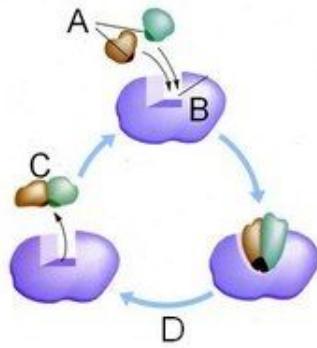
21. What is letter B?



- a) substrate  
 c) active site

- b) enzyme

22. What is letter A?



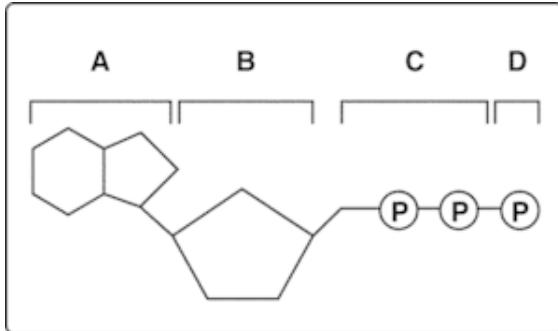
- a) substrate  
 c) products

- b) enzyme  
 d) large subunit

23. ATP gives us?

- |                                       |                                    |
|---------------------------------------|------------------------------------|
| <input type="checkbox"/> a) Sunlight  | <input type="checkbox"/> b) Energy |
| <input type="checkbox"/> c) Chemicals | <input type="checkbox"/> d) Sun    |

24. Using the figure, which parts of the molecule must the bonds be broken to form an ADP molecule?



- |                                     |  |
|-------------------------------------|--|
| <input type="checkbox"/> a) A and B | <input type="checkbox"/> b) B and C          |
| <input type="checkbox"/> c) C and D | <input type="checkbox"/> d) all of the above |

25. What are the parts of the ATP molecule?

- |   |  |
|---|--|
| <input type="checkbox"/> a) adenine, thylakoids, stroma       | <input type="checkbox"/> b) stroma, grana, chlorophyll |
| <input type="checkbox"/> c) adenine, ribose, phosphate groups | <input type="checkbox"/> d) NADH, NAHPH, FADH          |

26. Where does the energy for ATP ultimately come from?

- |  |                                     |
|--|-------------------------------------|
| <input type="checkbox"/> a) pyruvic acid | <input type="checkbox"/> b) protein |
| <input type="checkbox"/> c) lipid        | <input type="checkbox"/> d) glucose |

27. Which cellular organelle is responsible for manufacturing ATP?

- |  |   |
|--|---|
| <input type="checkbox"/> a) Ribosome     | <input type="checkbox"/> b) Nucleus     |
| <input type="checkbox"/> c) Mitochondria | <input type="checkbox"/> d) Chloroplast |

28. How do enzymes speed up chemical reaction?

- |  |  |
|--|--|
| <input type="checkbox"/> a) Increasing activation energy   | <input type="checkbox"/> b) Decreasing activation energy   |
| <input type="checkbox"/> c) Increasing deactivation energy | <input type="checkbox"/> d) Decreasing deactivation energy |

29. What is a substance called if it speeds up a chemical reaction?

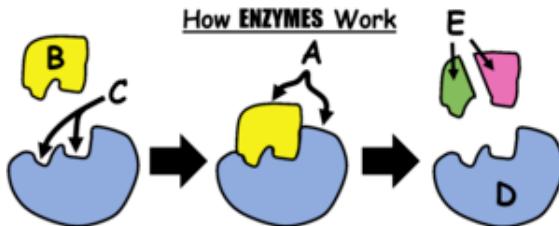
- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| <input type="checkbox"/> a) reusable | <input type="checkbox"/> b) catalyst |
| <input type="checkbox"/> c) specific | <input type="checkbox"/> d) fragile  |

30. An enzyme speeds up a chemical reaction in the cell but can only be used once. True or False?

a) true

b) false

31. Letter E...



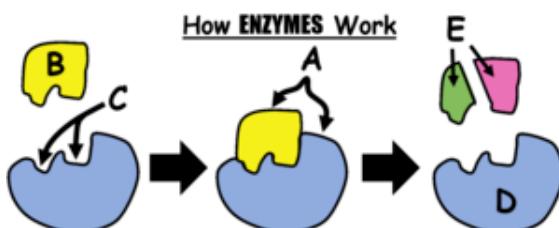
a) active site

b) enzyme

c) substrate

d) products

32. Letter C...



a) active site

b) enzymes

c) substrate

d) products

33. Used in endurance activities such as long distance running

a) Fast Twitch

b) Slow Twitch

34. Fatigue Slowly

a) Fast Twitch

b) Slow Twitch

35. Use aerobic respiration

a) Slow Twitch

b) Fast Twitch

36. Has a higher density of capillaries in order to provide oxygen

a) Slow Twitch

b) Fast Twitch

37. Uses anaerobic respiration

a) Slow Twitch

b) Fast Twitch

38. Muscle is dark in colour due to rich blood supply and high myoglobin

a) Slow Twitch

b) Fast Twitch

39. Breast meat in chickens

a) Slow Twitch

b) Fast Twitch

40. Used for bursts of activity

a) Slow Twitch

b) Fast Twitch

41. Which hypothesis is this testing if Snails are placed in blue Bromothymol Blue?

a) Snails use up CO<sub>2</sub> and will turn solution yellow

b) Snails produce CO<sub>2</sub> and will turn solution yellow

c) Snails produce CO<sub>2</sub> and solution should stay blue

d) Snails only produce CO<sub>2</sub> when placed in the dark.

42. True or False: The mitochondria contains DNA

a) True

b) False

43. At what point during cellular respiration is glucose fully broken down?

a) glycolysis

b) link reaction

c) Kreb's cycle

d) electron transport chain

44. What provides the energy to convert ADP back into ATP during cellular respiration

a) NADH created during glycolysis

b) H<sup>+</sup> ions stockpiled in the inter-membrane space

c) NADH and FADH<sub>2</sub> made in the Kreb's cycle

d) none of the above

45. This terminal electron acceptor (aka "clean up crew") cleans up H<sup>+</sup> and electrons in the matrix during the ETC

a) NADH

b) FADH<sub>2</sub>

c) oxygen

d) ATP synthase

## Answer Key

- |       |       |       |       |
|-------|-------|-------|-------|
| 1. b  | 13. c | 25. c | 37. b |
| 2. b  | 14. a | 26. d | 38. a |
| 3. b  | 15. a | 27. c | 39. b |
| 4. d  | 16. b | 28. b | 40. b |
| 5. d  | 17. c | 29. b | 41. b |
| 6. a  | 18. b | 30. b | 42. a |
| 7. b  | 19. a | 31. d | 43. c |
| 8. b  | 20. d | 32. a | 44. b |
| 9. c  | 21. b | 33. b | 45. c |
| 10. a | 22. a | 34. b |       |
| 11. c | 23. b | 35. a |       |
| 12. b | 24. c | 36. a |       |