Quizizz

Cellular Respiration & Enzymes (H)

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) photosnthesis
   - 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) $6O_2 + C_6H_{12}O_6 \rightarrow 6CO_2 + 6H_2O + \text{Energy}$
   - b) $6O_2 + C_6H_{12}O_6 + \text{Energy} \rightarrow 6CO_2 + 6H_2O$
   - c) $6CO_2 + 6H_2O \rightarrow 6O_2 + C_6H_{12}O_6 + \text{Energy}$
   - d) $6CO_2 + 6H_2O + \text{Energy} \rightarrow 6O_2 + C_6H_{12}O_6$

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.....

- a) doesn't require CO2
- b) requires CO2
- c) doesn't require oxygen
- d) requires oxygen

10. What is cellular respiration?

- a) the breakdown of glucose to release ATP
- b) the breakdown of glucose to release NADH
- c) the breakdown of glucose to release FADH
- d) the breakdown of glucose to release carbon

11. Which molecule isn't an energy carrier?

- a) $FADH_2$
- b) NADH
- c) oxygen
- d) ATP

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

- a) 0
- b) 2
- c) 4
- d) 1

13. The expression "feel the burn" means that a person exercising is doing

- a) lactic acid fermentation
- b) alcoholic fermentation
- c) photosynthesis
- d) aerobic respiration

14. What is glucose converted to during glycolysis?

- a) Acetyl-Co A
- b) Coenzyme A
- c) Pyruvate
- d) Sucrose

15. What comes next after glycolysis if oxygen is present

- a) Krebs cycle
- b) Electron transport chain
- c) Alcoholic Fermentation
- d) Lactic Acid Fermentation

16. What is the purpose of photosynthesis?

- a) make glucose
- b) make ATP
- c) make light
- d) release carbon dioxide

17. Enzymes are made of what organic molecule?

- a) carbs
- b) protein
- c) lipids
- d) nucleic acids

18. How do enzymes affect reactions?

- a) slow them down by raising activation energy
- b) slow them down by lowering the temperature
- c) speed them up by lowering the activation energy
- d) doesn't affect them in anyway

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

- a) Kreb's cycle
- b) calvin cycle
- c) glycolysis
- d) citric acid cycle

20. The part of an enzyme where the substrate binds

- a) active site
- b) catalyst
- c) large subunit
- d) inhibitor

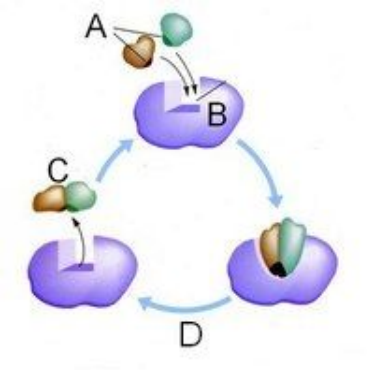
21. What is the body's main energy molecule?

- a) ADP
- b) NADH
- c) FADH
- d) ATP

22. What type of organism undergoes cellular respiration?

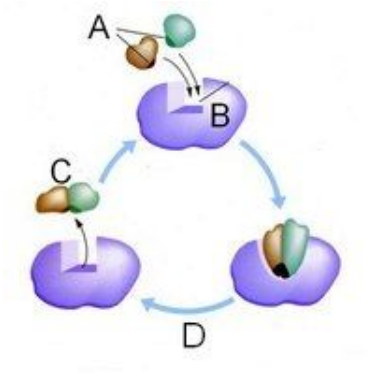
- a) plants
- b) animals
- c) bacteria
- d) both plants and animals

23. What is letter B?



- a) substrate
- b) enzyme
- c) active site

24. What is letter A?

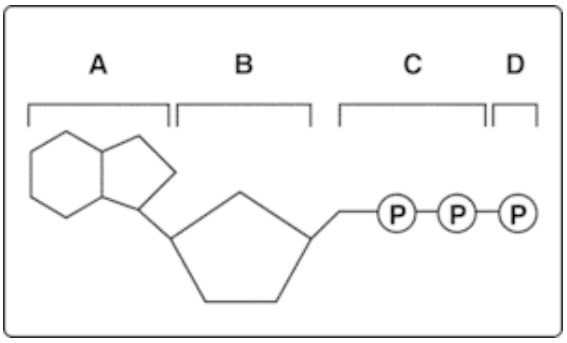


- a) substrate
- b) enzyme
- c) products
- d) large subunit

25. ATp gives us?

- a) Sunlight
- b) Energy
- c) Chemicals
- d) Sun

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



- a) A and B
- b) B and C
- c) C and D
- d) all of the above

27. What are the parts of the ATP molecule?

- a) adenine, thylakoids, stroma
- b) stroma, grana, chlorophyll
- c) adenine, ribose, phosphate groups
- d) NADH, NAHPH, FADH

28. Where does the energy for ATP come from?

- a) Nucleic Acid
- b) Protein
- c) Lipid
- d) Carbohydrate

29. Which cellular organelle is responsible for manufacturing ATP?

- a) Ribosome
- b) Nucleus
- c) Mitochondria
- d) Chloroplast

30. How do enzymes speed up chemical reaction?

- a) Increasing activation energy
- b) Decreasing activation energy
- c) Increasing deactivation energy
- d) Decreasing deactivation energy

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

- a) reusable
- b) catalyst
- c) specific
- d) fragile

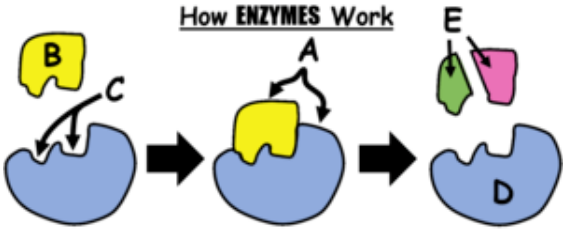
32. An enzyme speeds up a chemical reaction in the cell but can only be used once. True or False?

- a) true
- b) false

33. What is another name for enzymes?

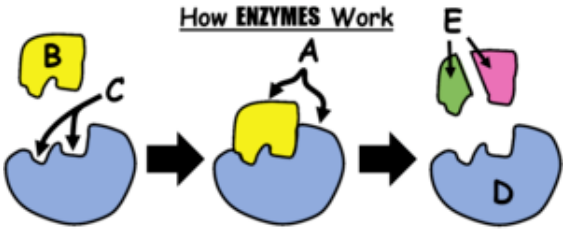
- a) chemical catalysts
- b) microorganisms
- c) biological catalysts
- d) inorganic catalysts

34. Letter E...



- a) active site
- b) enzyme
- c) substrate
- d) products

35. Letter C...



- a) active site
- b) enzymes
- c) substrate
- d) products

36. Used in endurance activities such as long distance running

- a) Fast Twitch
- b) Slow Twitch

37. Fatigue Slowly

- a) Fast Twitch
- b) Slow Twitch

38. Use aerobic respiration

- [ ] a) Slow Twitch
- [ ] b) Fast Twitch

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

- [ ] a) Slow Twitch
- [ ] b) Fast Twitch

40. Uses anaerobic respiration

- [ ] a) Slow Twitch
- [ ] b) Fast Twitch

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

- [ ] a) Slow Twitch
- [ ] b) Fast Twitch

42. Breast meat in chickens

- [ ] a) Slow Twitch
- [ ] b) Fast Twitch

43. Used for bursts of activity

- [ ] a) Slow Twitch
- [ ] b) Fast Twitch

44. Which hypothesis is this testing if Snails are place in blue Bromothymol Blue?

- [ ] a) Snails use up CO_2 and will turn solution yellow
- [ ] b) Snails produce CO_2 and will turn solution yellow
- [ ] c) Snails produce CO_2 and solution should stay blue
- [ ] d) Snails only produce CO_2 when place in the dark.

45. True or False: The mitochondria contains DNA

- [ ] a) True
- [ ] b) False

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

- [ ] a) glycolysis
- [ ] b) link reaction
- [ ] c) Kreb's cycle
- [ ] d) electron transport chain

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

- [ ] a) NADH created during glycolysis
- [ ] b) H+ ions stockpiled in the inter-membrane space
- [ ] c) NADH and FADH2 made in the Kreb's cycle
- [ ] d) none of the above

48. Yeast and some bacteria that tries to make energy in an environment without oxygen create ethanol from this electron acceptor?

- a) pyruvic acid (3C)
- b) acetaldehyde (2C)
- c) lactic acid (3C)
- d) acetyl Co-A (2C)

49. Denaturing an enzyme can be due to

- a) (a) temperatures that are too hot
- b) (b) temperatures that are too cold
- c) (c) pH levels that are too acidic or too basic
- d) (d) both (a) & (c) are correct

50. If you increase the substrate concentration but keep the enzyme concentration the same, the effect on the reaction rate (*seconds per substrate reaction*) is

- a) the reaction rate will speed up, more substrates are present
- b) the reaction rate will not change, enzymes cannot work any faster
- c) the reaction rate will slow down, enzymes will get tired
- d) none of the above

51. If you <u>increase the enzyme concentration</u> but keep the <u>substrate concentration the same</u>, the effect on the reaction rate (*seconds per substrate reaction*) is

- a) the reaction rate will speed up, more enzymes are working
- b) the reaction rate will not change, the same number of enzymes are working
- c) the reaction rate will slow down, because fewer enzymes are working
- d) none of the above

52. Competitive inhibition means that

- a) many enzymes are fighting for the same substrate
- b) another compound is getting in the way of the active site so substrates can't reach it
- c) another compound turns the enzyme on or off, like a light switch
- d) all of the above are correct

53. Non-competitive inhibition means that

- [ ] a) many enzymes are fighting for the same substrate
- [ ] b) another compound is getting in the way of the active site so substrates can't reach it
- [ ] c) another compound turns the enzyme on or off, like a light switch
- [ ] d) all of the above are correct

Answer Key

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