**SBI4U – Metabolic Processes - Anaerobic Respiration Quiz**  /18

1. When are fermentation pathways useful for providing energy?

a. When enough oxygen is not available

b. When the Krebs cycle won't go fast enough

c. When it is the only pathway present for producing ATP

d. Never, they provide only NADPH

e. a and c are correct

2. What are the end products of lactate fermentation from glucose?

a. Lactate

b. NAD+

c. NADH

d. Pyruvate

e. a and b are correct

3. What are the end products of alcohol fermentation from glucose?

a. Acetaldehyde

b. Ethanol

c. NAD+

d. NADH

e. b and c are correct

4. What causes bread to rise?

a. Amoebae break down the sugar and release carbon dioxide

b. Bacteria break down the sugar and release carbon dioxide

c. Yeasts break down the sugar and release carbon dioxide

d. Algae break down the sugar and release carbon dioxide

5. How are lactate and alcohol fermentation different?

a. Their organic compound end products are different

b. Lactate fermentation ends with a 3 carbon compound, alcohol fermentation ends with a 2-carbon one

c. Carbon dioxide is released with only alcohol fermentation

d. Water is added only with alcohol fermentation

e. All of the above are correct

6. In which fields are bacteria that carry out lactate fermentation useful?

a. Yogurt production

b. Beer production

c. Bread production

d. Wine production

7. Only bacteria are capable of anaerobic respiration.

a. True

b. False

8. Why isn't anaerobic respiration effective for larger organisms?

a. The energy yield is too small

b. It causes too much glucose to be burned up

c. It results in products that may be toxic to the organism

d. NAD+ is lost over time because it can't be regenerated

e. Only d is false

9. More ATP is produced through alcohol than lactate fermentation.

a. True

b. False

10. What is(are) the main function(s) of fermentation pathways from glucose?

a. NAD+ regeneration

b. To allow glycolysis to continue to produce ATP without feedback inhibition from pyruvate

c. To produce more ATP than from aerobic respiration

d. To produce ATP for cell use

e. Only c is incorrect

11. Why are anaerobic electron transport chains important?

a. They allow inorganic compounds to act as a terminal electron acceptors

b. They increase the ATP formed from anaerobic respiration

c. They can work with both oxygen and sulfate as the terminal electron acceptors at the same timed.

d. They can work with both oxygen and methane as the terminal electron acceptors at the same time

e. a and b are correct

12. If a human muscle cell runs out of oxygen over a short period of time, what process can it use to get ATP?

a. Alcohol fermentation

b. Lipid fermentation

c. Lactate fermentation

d. Peptide fermentation

13. \_\_\_\_\_\_\_\_\_\_ means the release of energy using oxygen

a. Aerobic respiration

b. Anaerobic respiration

c. Mitochondria

d. Enzymes

14. The overall equation for glucose metabolism is C6H12O6 + 6O2 --> 6CO2 + 6H2O + ATP and heat. The carbon atoms in the CO2 molecules in this equation come from \_\_\_\_\_\_\_\_\_\_ during reactions of \_\_\_\_\_\_\_\_\_\_.

a. C6H12O6, glycolysis

b. C6H12O6, the Krebs cycle

c. O2, the electron transport system

d. C6H12O6, the electron transport system

15. What is this formula C6 H12 O6 + 6O2 = 6H2 O + 6C O2

a. Aerobic respiration

b. Anaerobic respiration

c. Amino acid

d. Osmosis

16. How many ATPs formed in anaerobic respiration?

a. 36

b. 37

c. 38

d. 40

17. Define anaerobic respiration?

a. The process in which the amount of water is less

b. The process in which the respiration takes place in the absence of oxygen

c. The process in which the amount of water is more

d. The process in which the acid reacts with base to form salt

18. NADH in the process of anaerobic respiration is

a. Oxidised

b. Reduced

c. Released

d. Converted to ATP