

1. (1.00 pts) Glycolysis is the conversion of glucose to what 3 carbon compound?

- A) Lactic acid
- B) Pyruvate
- C) Pyruvate
- D) Propionic acid

2. (1.00 pts) The inoculum to make Kefir is:

- A) Kefir grains
- B) Cocoa beans
- C) Leuconstoc cultures
- D) Lactobacillus cultures

3. (1.00 pts) A food scientist who studies fermented food products may be referred to as a:

- A) Zoologist
- B) Zymologist
- C) Fermentologist
- D) Chemist

4. (1.00 pts) Select the food product that is not made by a fermentation process:

- A) bread
- B) chocolate
- C) yogurt
- D) pickles
- E) all of the foods may be made by a fermentation process

5. (1.00 pts) Select the food product that has slow acting yeast which produce alcohol and CO₂ in the final product:

- A) Kefir
- B) Sauerkraut
- C) Kefir
- D) Yogurt

6. (1.00 pts) Sauerkraut and other fermented food products become acidic which prevents the growth of what deleterious microbe?

- A) Clostridium botulinum
- B) Sacchromyces cerevisiea
- C) Lactobacillus plantarum
- D) Acetobacter pasteurianus

7. (1.00 pts) Invertase is an enzyme catalyzes which reaction?

- A) Sucrose + H₂O → Glucose + Fructose
- B) Maltose + H₂O → Glucose + Glucose
- C) Lactose + H₂O → Glucose + Galactose
- D) Amylose + H₂O → Glucose

8. (1.00 pts) A student has 3 test tubes containing disaccharides. She identifies one sugar as not being a reducing sugar. What is this sugar most likely to be?

- A) Lactose
- B) Maltose
- C) Sucrose
- D) Amylopectin

9. (1.00 pts) What is a biological advantage for microbes that release acidic compounds as part of their metabolic processes?

- A) The acidic compounds can be further metabolized (i.e. an alternative food source).
- B) The acidic compounds neutralize the environment.
- C) The resulting acidic environment inhibits the growth of competitive microbes.
- D) There is no biological advantage – merely the result of metabolism.

10. (1.00 pts) What are the final (waste) products of glucose metabolism in aerobic organisms?

- A) CO₂ and H₂O
- B) Pyruvate and H₂O
- C) ATP and H₂O
- D) ATP, NADH, and H₂O

11. (1.00 pts) How many electrons are required to fully reducing oxygen (O₂) to water (2 molecules)?

- A) 1 electron
- B) 2 electron
- C) 4 electron
- D) 6 electron
- E) 8 electron

12. (1.00 pts) In eukaryotic cells such as yeast, where does the Krebs's cycle take place?

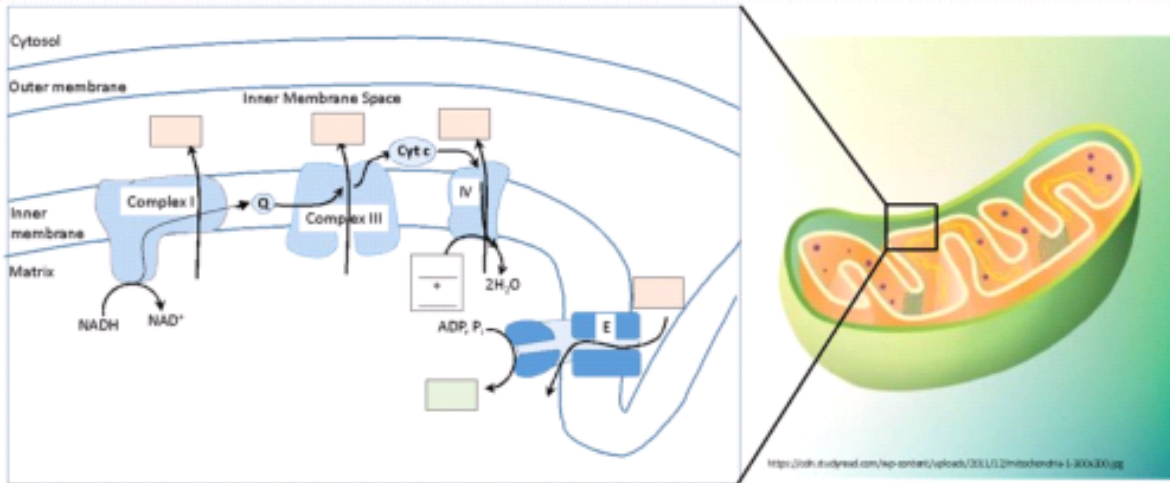
- A) in the cytosol (cytoplasm)
- B) in the mitochondria
- C) in the chloroplasts
- D) in the golgi apparatus

13. (1.00 pts) How many ATP molecules are formed directly from the Citric acid cycle?

- A) 0 ATP molecules per cycle
- B) 2 ATP molecules per cycle
- C) 4 ATP molecules per cycle
- D) 6 ATP molecules per cycle

Short Answer/Fill in the blank

Please complete the diagram below – fill in the boxes. A chemical species may appear in more than one box. Then use the diagram to help answer the questions below.



14. (1.00 pts) What do Ubiquinone (Q) and Cytochrome c (Cyt c) carry as a function of the electron transport chain?

Electrons

The inner membrane has two sides, named P for positive (charge) and N for negative

15. (1.00 pts) The P side is also referred to as the:

Inner membrane space

16. (1.00 pts) The N side is referred to as the:

Matrix

17. (1.00 pts) How many ATP molecules are directly synthesized by the electron transport chain (e.g complex I – IV)?

None

Thanks for participating!