Practice Questions Ch 2, part 1

1. Which of the following ketone bodies is not used for ATP production and is exhaled from the body as a sweet-smelling breath?
   A. Cholesterol.  
   B. Glycerol.  
   C. Acetoacetic acid.  
   D. Acetone.  
   E. Beta hydroxybutyric acid.

2. The conversion of glucose 6-phosphate into free glucose, which can be secreted into the bloodstream, occurs in
   A. the liver.  
   B. the skeletal muscles.  
   C. Both A & B

3. The presence of which enzyme is needed to convert glucose 6-phosphate into free glucose?
   A. Amylase.  
   B. Creatine phosphatase.  
   C. Glycogen synthase.  
   D. Glucose 6-phosphatase.  
   E. Glycogen phosphorylase.  
   F. Glucose 6-phosphorylase.

4. The formation of glucose form lactic acid, amino acids, or fatty acids.
   A. Glycogenesis.  
   B. Glycogenolysis.  
   C. Glycolysis.  
   D. Glucogenesis.

5. Which of the following molecules enters the Kreb’s cycle?
   A. Pyruvate.  
   B. Glucose.  
   C. Acetyl Co-A.  
   D. Hydrogen ions  
   E. Oxygen.

6. Which of the following occurs within the cell cytoplasm?
   A. Kreb’s cycle.  
   B. Glycolysis.  
   C. Fermentation.  
   D. Electron transport chain

7. Which of the following occurs within the mitochondria of cells?
   A. Kreb’s cycle.  
   B. Glycolysis.  
   C. Fermentation.  
   D. Electron transport chain

8. Which of the following is a product of 2 molecules of Acetyl Co-A entering the Kreb’s cycle?
   A. 2 NADH2, 2 ATP, and 2 pyruvate.  
   B. 2 NADH2, 2 FADH2, 4 CO2, and 2 ATP  
   C. 3 NADH, 1 FADH2, 2 CO2, and 1 ATP  
   D. 6 NADH, 2 FADH2, 4 CO2, and 2 ATP

9. Which of the following is a product of 2 pyruvate entering pyruvate processing?
   A. 2 NADH2, 2 ATP, and 2 pyruvate.  
   B. 2 NADH2, 2 CO2, 2 ATP, and 2 pyruvate  
   C. 2 NADH2, 2 CO2, 2 ATP, and 2 Acetyl-Co-A  
   D. 6 NADH, 2 FADH2, 4 CO2, and 2 ATP  
   E. 10 NAD+, 2 FAD+, 12 H2O, and 30 ATP.  
   F. 10 NADH2, 2 FADH2, 12 H2O, and 30 ATP.  
   G. 2 NADH2, 2 CO2, and 2 Acetyl Co-A
10. Which of the following is a product of 6 NADH2 and 2 FADH2 entering the electron transport chain?
   A. 2 NADH2, 2 ATP, and 2 pyruvate.  
   B. 2 NADH2, 2 FADH2, 4 CO2, and 2 ATP  
   C. 3 NADH2, 1 FADH2, 2 CO2, and 1 ATP  
   D. 6 NADH2, 2 FADH2, 4 CO2, and 2 ATP  
   E. 10 NAD+, 2 FAD+, 12 H2O, and 30 ATP.  
   F. 10 NADH2, 2 FADH2, 12 H2O, and 30 ATP.  
   G. 2 NADH2, 2 CO2, and 2 Acetyl Co-A

11. The hormonal stimulus for glycogenesis in the liver or skeletal muscles.
   A. GHRH  
   B. GnRH  
   C. GH  
   D. Insulin  
   E. Glycogen  
   F. Glucagon  
   G. Glycogen synthase.

12. The hormonal stimulus for glycogenolysis.
   A. GHRH  
   B. GnRH  
   C. GH  
   D. Insulin  
   E. Glucagon  
   F. Glycogen  
   G. Glycogen synthase.

13. The importance of the Krebs cycle in energy production is the formation of significant amounts of
   A. ATP.  
   B. lactic acid.  
   C. NADH.  
   D. carbon dioxide.

14. Excess amino acids are converted into ________ for excretion by the kidneys.
   A. Fatty acids.  
   B. Urea.  
   C. Pyruvate.  
   D. Glucose.  
   E. Ketones.

15. Metabolic acidosis can be caused by excessive metabolism of
   A. protein.  
   B. ketones.  
   C. glucose.  
   D. glycogen.  
   E. fatty acids.  
   F. A & E.  
   G. C & D.  
   H. A, B, and E.
Ch 2. Answers:
1. D
2. A
3. D
4. E
5. C
6. F
7. E
8. D
9. G
10. E
11. D
12. E
13. C
14. B
15. H

How did you do?