

1. In humans, glucose is stored as glycogen in _____.

- (A) muscles and fat
- (B) muscles and liver**
- (C) liver and fat
- (D) muscles and pancreas

2. The carbon atom removed from pyruvate as it enters the Krebs cycle in the mitochondrion is used to make _____.

- (A) glucose
- (B) lactate
- (C) acetate
- (D) carbon dioxide**

3. The 2-carbon molecule left behind from pyruvate is combined with coenzyme A to make acetyl coenzyme A. Acetyl coenzyme A _____.

- (A) is broken down into long chain glycogen molecules
- (B) is oxidized to acetic acid
- (C) enters the Krebs cycle**
- (D) transports oxygen molecules into the mitochondrion

4. Besides coming from molecules of glucose, acetyl coenzyme A can also come from all of the following molecules except _____.

- (A) cellulose**
- (B) glycogen
- (C) fatty acids
- (D) triglycerides

5. The hormone that stimulates the breakdown of triglycerides into fatty acids is _____.

- (A) aldosterone
- (B) adrenaline**
- (C) antidiuretic hormone
- (D) glucagon

6. The molecule that escorts fatty acids into mitochondria is _____.

- (A) acetyl coenzyme A
- (B) lactate
- (C) ATP synthase
- (D) carnitine**

7. Pound for pound fat has twice as much energy as carbohydrates, because fat has _____.

- (A) a higher concentration of carbon-oxygen bonds than carbohydrates
- (B) a higher concentration of carbon atoms than carbohydrates
- (C) a lower concentration of oxygen atoms than carbohydrates**
- (D) a lower concentration of carbon-hydrogen bonds than carbohydrates

8. Except for their seeds, plants don't need fats and oils as an energy source because _____.

- (A) plants can rely on sunlight for energy
- (B) plants can use their large supply of cellulose for their energy needs
- (C) plants rely heavily on water for their stability and water does not mix well with fats and oils
- (D) plants are not mobile**

9. Plants store carbohydrates for future energy needs as starch in all of the following except _____.

- (A) their fruit
- (B) their roots
- (C) their tubers
- (D) their cellulose**

10. Which of the following statements is true?

- (A) Plants make ATP with their chloroplasts and therefore do not need mitochondria to make ATP.
- (B) Bacteria do not have mitochondria.**
- (C) Plants make oxygen in their chloroplasts, and thus do not consume oxygen molecules.
- (D) Bacteria do not have an electron transport chain.