



Chapter 11: RESPIRATION IN PLANTS

BIOLOGY

ELITE IIT 1

1. This biomolecule is common to a respiration-mediated breakdown of fats, carbohydrates and proteins (NEET-II 2016)

- A. Acetyl CoA C. fructose 1, 6-bi phosphate
B. Pyruvic acid D. Glucose-6-phosphate

2. This is an incorrect statement for Kreb's cycle (NEET 2017)

- A. There are three points in the cycle where NAD^+ is reduced to $\text{NADH} + \text{H}^+$
B. The cycle starts with the condensation of acetyl group (acetyl CoA) with pyruvic acid to yield citric acid
C. during the conversion of succinyl CoA to succinic acid, a molecule of GTP is synthesized
D. there is one point in the cycle where FAD^+ is reduced to FADH_2

3. This metabolite is common to respiration-mediated breakdown of fats, carbohydrates and proteins (NEET 2013)

- A. Fructose 1, 6-bisphosphate
B. Glucose – 6 – phosphate
C. Acetyl CoA
D. Pyruvic acid

4. The energy-releasing metabolic process in which substrate is oxidized without an external electron acceptor is called (2010, 2008)

- A. Photorespiration C. Glycolysis
B. Aerobic respiration D. Fermentation

5. The chemiosmotic coupling hypothesis of oxidative phosphorylation proposes that adenosine triphosphate (ATP) is formed because (2008)

- A. ADP is pumped out of the matrix into the intermembrane space
B. high energy bonds are formed in mitochondrial proteins
C. there is a change in the permeability of the inner mitochondrial membrane towards adenosine diphosphate (ADP)
D. a protein gradient forms across the inner membrane

6. The overall goal of glycolysis, Kreb's cycle and the electron transport system is the formation of (2007)

- A. sugars
B. ATP in small stepwise units
C. ATP in one large oxidation reaction
D. nucleic acids

7. How many ATP molecules could maximally be generated from one molecule of glucose, if the complete oxidation of one mole of glucose to CO_2 and H_2O yields 686 kcal and the useful chemical energy available in the high energy phosphate bond of one mole of ATP is 12 kcal? (2006)

- A. 57 C. 2
B. 30 D. 1

8. During which stage in the complete oxidation of glucose is the greatest number of ATP molecules formed from ADP? (2005)

- A. Electron transport chain
B. Kreb's cycle
C. Glycolysis
D. Conversion of pyruvic acid to acetyl CoA

9. In alcohol fermentation (2003)

- A. triose phosphate is the electron donor while pyruvic acid is the electron acceptor
B. triose phosphate is the electron donor while acetaldehyde is the electron acceptor
C. oxygen is the electron acceptor
D. there is no electron donor

10. How many ATP molecules are produced by aerobic oxidation of one molecule of glucose?

- A. 38 C. 4 (2002)
B. 34 D. 2

Answer

01.	02.	03.	04.	05.	06.	07.	08.	09.	10.
A	B	C	D	D	B	A	A	B	A