

- 1) The coupling factor which links oxidation to phosphorylation is:**
- Mitochondrial ATPase**
 - Cytosolic citrate lyase**
 - Cytochrome oxidase**
 - Pyruvate dehydrogenase**
- 2) The final electron acceptor of complex I is:**
- Oxygen**
 - Ubiquinone**
 - Cytochrome c**
 - Non-Heme iron protein**
- 3) Which of the following compounds inhibit the phosphorylation of ADP without affecting electron transport?**
- Antimycin A**
 - Amytal**
 - Rotenone**
 - Gramicidin A**
- 4) The only complex in electron transport chain which actually uses molecular oxygen is:**
- Complex I**
 - Complex II**
 - Complex III**
 - Complex IV**
- 5) The reactions of electron transport chain take place in the mitochondria occur in:**
- The outer membrane**
 - The inner membrane**
 - The mitochondrial matrix**
 - The intermembrane space**
- 6) Cyanide ion is poisonous because it:**
- Interfere with fatty acid transport**
 - Activate fatty acid desaturation**
 - Inhibit gluconeogenesis**
 - Inhibit mitochondrial oxidation**

- 7)** Another name for complex I in the mitochondria is:
- Cytochrome C oxidase
 - NADH-CoQ oxireductase
 - Succinate-CoQ oxireductase
 - Cytochrome A oxidase
- 8)** The enzyme that couples oxidation to phosphorylation in the electron transport chain is:
- Cytochrome c oxidase
 - ATP synthase
 - Cytochromes oxidase
 - Succinate-CoQ oxireductase
- 9)** Most of the ATP made during cellular respiration is generated by:
- Substrate level phosphorylation
 - Oxidative phosphorylation
 - Glycolysis
 - Photophosphorylation
- 10)** How many different peptide chains the F₀ portion of ATP synthase has?
- 3
 - 4
 - 5
 - 6
- 11)** Which of the following is an uncoupler compound in the electron transport chain?
- Gramicidin A
 - Bacteriorhodopsin
 - FMN
 - Antimycin A

12) The energy coupling factor during oxidative phosphorylation system is:

- a. Proton pump
- b. Voltage potential
- c. pH
- d. ATP synthase

13) When mitochondria are actively carrying out aerobic respiration:

- a. The pH of the matrix is greater than the pH of the intermembrane space
- b. The pH of the matrix is less than the pH of the intermembrane space
- c. The pH of the matrix is about the same as the pH of the intermembrane space
- d. The pH of the matrix versus the intermembrane space has nothing to do with whether or not aerobic respiration is occurring

Q: The complete reduction of one molecule of oxygen requires how many electrons?

- a. 1
- b. 2
- c. 4
- d. 8

A

B

D

D

B

D

B

B

B

A

A

D

A

C