

- 1) Which of the following statements regarding fructose-2,6-bisphosphate is NOT CORRECT
- It inhibits phosphofructokinase
 - It inhibits fructose-1,6-bisphosphatase
 - It's a keto sugar
 - Its increased level stimulate glycolysis
- 2) In the reaction: succinate + FAD \rightarrow fumarate + FADH₂, which of the following substances is the electron acceptor?
- Succinate
 - Fumarate
 - FAD
 - FADH₂
- 3) In glyoxylate cycle oxaloacetate is formed from:
- Fumarate
 - Citrate
 - One acetyl-CoA and succinate
 - Two acetyl-CoA
- 4) In human acetyl-CoA can be produced from catabolism of all of the following EXCEPT:
- Cholesterol
 - Fatty acids
 - Amino acids
 - Glucose
- 5) Which of the following enzymes is allosterically inhibited by ATP?
- Pyruvate dehydrogenase complex
 - Succinyl-CoA synthetase
 - Succinate dehydrogenase
 - Fumarase

- 6) How many ATP molecules are produced from the complete oxidation of one molecule of pyruvate?
- 12.5 ATP
 - 25 ATP
 - 10 ATP
 - 20 ATP
- 7) Which of the following pairs involved in both gluconeogenesis and Kerbs' cycle?
- GTP/GDP
 - FAD/FADH₂
 - ATP/ADP
 - All of the above
- 8) During exercise, muscle cells have:
- High ATP/ADP ratio
 - High NADH/NAD⁺ ratio
 - Low pyruvate concentration
 - Low NADH/NAD⁺ ratio
- 9) Which of the following steps in citric acid cycle represent substrate level phosphorylation?
- Oxaloacetate + acetylCoA → citrate
 - Alpha-ketoglutarate → succinyl-CoA
 - Succinyl-CoA → succinate
 - Fumarate → malate
- 10) When we describe citric acid cycle as amphibolic, we mean that:
- It produce and consume GTP
 - It plays role in both catabolism and anabolism
 - It produce both NADH and FADH₂
 - It links glycolysis pathway with oxidative phosphorylation pathway

11) All reaction of citric acid cycle take place in mitochondrial matrix EXCEPT:

- a. Citrate to isocitrate
- b. Isocitrate to alphaketoglutarate
- c. Succinyl-CoA to succinate
- d. Succinate to fumarate

12) Formation of oxaloacetate from malate in citric acid cycle is followed by:

- a. Formation of isocitrate from citrate
- b. Formation of citrate from oxaloacetate and acetyl-CoA
- c. Formation of succinate from succinyl-CoA
- d. Formation of fumarate from succinate

13) Which of the following substances is a direct precursor of succinyl-CoA in Krebs' cycle?

- a. Malic acid
- b. Succinic acid
- c. Oxaloacetic acid
- d. Citric acid
- e. α -ketoglutaric acid

14) which coenzyme listed below is NOT associated with alpha-ketoglutarate dehydrogenase complex?

- a. Thiamine pyrophosphate
- b. Lipoic acid
- c. Biotin
- d. NAD⁺

- 1 A (chapter 18)
- 2 C
- 3 D
- 4 A
- 5 A
- 6 A
- 7 A
- 8 D
- 9 C
- 10 B
- 11 D
- 12 B
- 13 E
- 14 C