

Multiple choice questions on glycolysis and kreb's cycle

1. Enzymes of glycolysis are present in:
 - a. Lysosomes
 - b. Mitochondria Christy
 - c. Cytoplasm
 - d. Mitochondrial matrix.

2. The site of glycolysis in cell is :
 - a. Nucleus
 - b. Chloroplast
 - c. Cytoplasm
 - d. Mitochondrial matrix.

3. Maximum number of ATP is synthesized during oxidation of:
 - a. Malic acid
 - b. Palmitic acid
 - c. Glucose
 - d. Beta amino acids.

4. Mitochondria are the seat of:
 - a. Excretion
 - b. Cellular respiration
 - c. Cellular digestion
 - d. Protein synthesis

5. Raw material of respiration is:
 - a. Glucose and fructose
 - b. Glucose and sucrose
 - c. Glucose and carbon dioxide
 - d. Glucose and oxygen.

6. The function of cellular respiration is to:
 - a. Make NADH
 - b. Make ATP
 - c. Get rid of glucose
 - d. Get rid of carbon dioxide

7. Anaerobic respiration is a type of:
 - a. Complete oxidation
 - b. Putrefaction
 - c. Fermentation
 - d. Anabolic reaction

8. In anaerobic respiration in plants
 - a. Oxygen is absorbed
 - b. Oxygen is released
 - c. Carbon dioxide is absorbed
 - d. Carbon dioxide is released

9. Anaerobic process after glycolysis is called:
 - a. Calvin cycle
 - b. TCA cycle
 - c. Cori cycle
 - d. None of these

10. First phase in breakdown of glucose in animal cell is:
 - a. Fermentation
 - b. Glycolysis
 - c. TCA cycle
 - d. Glyoxylate pathway

11. The enzyme which converts glucose to glucose 6 phosphate is:
 - a. Phosphorylase
 - b. Hexokinase
 - c. Glucose synthase
 - d. Glucose 6 phosphate.

12. EMP can produce a total of:
 - a. 6 ATP
 - b. 8 ATP
 - c. 24 ATP
 - d. 38 ATP

13. Most of the energy in the cell is liberated by oxidation of carbohydrate when:
- Pyruvic acid is converted into acetyl coenzyme A
 - Pyruvic acid is converted into carbon dioxide and water
 - Sugar is converted into pyruvic acid
 - Glucose is converted into alcohol and carbon dioxide.
14. NADH of glycolysis react with inorganic element during Liberation of energy, this respiration is :
- Aerobic respiration
 - Anaerobic respiration
 - Photorespiration
 - Fermentation
15. In kreb's cycle the hydrogen atoms removed at succinate level are accepted by:
- FAD
 - ADP
 - ATP
 - NAD
16. In kreb's cycle FAD is the electron acceptor during the conversion of:
- Succinyl coenzyme A to succinic acid
 - Alpha ketoglutarate to succinyl coenzyme A
 - Fumaric acid to malic acid
 - Succinic acid to fumaric acid
17. The site of kreb's cycle in bacteria is:
- Plasma membrane
 - Nucleoid
 - Ribosome
 - Cytoplasm
18. Removal of hydrogen and carbon dioxide from a substrate is called:
- Decarboxylation
 - Oxidation
 - Oxidative decarboxylation
 - Hydrogenation

19. The pathway of kreb's cycle used for the synthesis of amino acid:
- Glutamic acid and aspartic acid
 - Alanine and glycine
 - Arginine and tryptophan
 - Glutamic acid and valine
20. Number of steps involved in the release of carbon dioxide during aerobic respiration is
- 12
 - 6
 - 3
 - 1
21. Acetyl coenzyme A is a react in citric acid cycle while and NADH and FADH₂ are the products if 12 molecules of NADH are produced over a period of time how many FADH₂ molecules are produced during this period?
- 4
 - 24
 - 12
 - 2
22. During the cellular respiration where is NADH produced?
- The endoplasmic reticulum
 - The cytosol
 - The mitochondria intermembrane space
 - The cytosol and mitochondrial matrix.
23. Within the kreb's cycle L malate and NAD⁺ come together to form oxaloacetate, NADH and hydrogen ion. What type of chemical reaction is responsible for this step in the cycle?
- Dehydration
 - Decarboxylation
 - Hydration
 - Oxidation

24. Cellular respiration is the set of metabolic reaction that occurs in the cell to produce energy in the form of ATP. During cellular respiration high energy intermediates are produced that can then be oxidized to make ATP. During what stage are these intermediates produced?
- Oxidative phosphorylation and citric acid cycle
 - Citric acid cycle
 - Oxidative phosphorylation
 - The kreb's cycle and glycolysis.
25. Which sentence is wrongly stated regarding the kreb's cycle?
- Oxygen is directly required for the citric acid cycle to occur
 - Another name for it is TCA cycle.
 - It occurs in mitochondrial Matrix for eukaryotes
 - Starting with 3 glucose molecules 6 GTP molecules would be produced.

