



QUIZ TIME

Bio- chemistry

Lec15

Done by:

RAGHAD
ALMOMANI

1. Glycolysis is the biochemical process of breaking down:

- A) Fatty acids to acetyl-CoA
- B) Glucose (6C) to pyruvic acid (3C) or lactic acid (3C)
- C) Amino acids to urea
- D) Glycogen to glucose-1-phosphate

Answer: B

2. How many ATP molecules are produced net during glycolysis?

- A) 1
- B) 2
- C) 4
- D) 36

Answer: B

3. Which of the following is true about NADH production in glycolysis?

- A) 1 NADH is produced per glucose molecule
- B) 2 NADH molecules are produced per glucose molecule
- C) NADH is not produced
- D) 4 NADH molecules are produced per glucose molecule

Answer: B

4. Where does glycolysis occur in the cell?

- A) Mitochondrial matrix
- B) Cytosol
- C) Endoplasmic reticulum
- D) Golgi apparatus

Answer: B

5. Glycolysis can occur anaerobically in:

- A) RBCs, muscle during exercise, cornea, and lens
- B) Liver only
- C) Brain only
- D) Kidney only

Answer: A

6. In the absence of oxygen, pyruvate is converted into:

- A) Acetyl-CoA
- B) Lactic acid
- C) CO₂ and H₂O
- D) Glucose

Answer: B

7. Which of the following statements is correct about glycolysis?

- A) It requires mitochondria to occur
- B) It always occurs aerobically
- C) It produces both ATP and NADH
- D) It occurs only in liver cells

Answer: C

8. Under aerobic conditions, pyruvate is converted into:

- A) Lactate
- B) Acetyl-CoA + CO₂ + NADH + H
- C) Ethanol + CO₂
- D) Glucose

Answer: B

9. In anaerobic glycolysis (no oxygen), pyruvate is converted to:

- A) Acetyl-CoA
- B) Lactate
- C) Ethanol
- D) Oxaloacetate

Answer: B

10. Which enzyme catalyzes the conversion of pyruvate to lactate in muscle cells?

- A) Pyruvate dehydrogenase
- B) Lactate dehydrogenase
- C) Phosphofruktokinase
- D) Aldolase

Answer: B

11. The accumulation of lactate in muscles during strenuous exercise leads to:

- A) Increased ATP production
- B) Increased muscle pH
- C) Decreased muscle pH, causing fatigue and pain
- D) Conversion of lactate to glucose immediately

Answer: C

12. Which enzyme catalyzes the conversion of glucose to glucose-6-phosphate in the first step of glycolysis?

- A) Fructokinase
- B) Glucokinase
- C) Phosphofruktokinase-1
- D) Aldolase

Answer: B

13. Phosphofruktokinase-1 (PFK-1) is considered the most important regulatory enzyme of glycolysis. What is its substrate?

- A) Glucose
- B) Glucose-6-phosphate
- C) Fructose-6-phosphate
- D) Fructose-1,6-bisphosphate

Answer: C

During glycolysis, which enzyme splits fructose-1,6-bisphosphate into two three-carbon molecules

- A-Isomerase
- B-Aldolase
- C-Glyceraldehyde -3-phosphate dehydrogenase
- D-Enolase

Answer: B

Which of the following statements about glyceraldehyde -3-phosphate dehydrogenase is correct

- A-produces ATP directly
- B-converted G3P to 1,3 bisphosphoglycerate
- C-converted pyruvate to lactate
- D-converted DHAP to G3P

Answer: B