

Chapter – 12 | Respiration in Plants**QUIZ
PART-02**

1. The word glycolysis means —

- A. Formation of sugar
- B. Breakdown of sugar
- C. Formation of oxygen
- D. Splitting of water (B)

Explanation : Glycolysis comes from Greek words “glycos” meaning sugar and “lysis” meaning breakdown.

2. Glycolysis is also known as —

- A. Calvin pathway
- B. EMP pathway
- C. Hatch-Slack pathway
- D. Krebs pathway (B)

Explanation : It is named after Embden, Meyerhof and Parnas.

3. Glycolysis occurs in the —

- A. Cytoplasm
- B. Mitochondrial matrix
- C. Inner mitochondrial membrane
- D. Chloroplast stroma (A)

Explanation : Glycolysis takes place in the cytoplasm of all living organisms.

4. In anaerobic organisms, glycolysis is —

- A. Not present
- B. The only process in respiration
- C. Only a photosynthetic process
- D. Present only in chloroplasts (B)

Explanation : Anaerobic organisms use glycolysis as the main respiratory pathway.

5. In glycolysis, one glucose molecule is partially oxidized to form —

- A. Two molecules of pyruvic acid
- B. One molecule of citric acid
- C. Two molecules of acetyl Co-A
- D. One molecule of oxaloacetic acid (A)

Explanation : Pyruvic acid is the end product of glycolysis.

6. Sucrose is converted into glucose and fructose by enzyme —

- A. Invertase
- B. Hexokinase
- C. Aldolase
- D. Enolase (A)

Explanation : In plants, sucrose is broken into glucose and fructose by invertase.

7. How many ATP molecules are used in phosphorylation of one glucose molecule?

- A. 1 ATP
- B. 2 ATP
- C. 3 ATP
- D. 4 ATP (B)

Explanation : Two ATP molecules are consumed to form fructose-1,6-diphosphate.

8. Fructose-1,6-diphosphate is split by —

- A. Aldolase
- B. Pyruvate kinase
- C. Citrate synthetase
- D. Alcohol dehydrogenase (A)

Explanation : Aldolase breaks fructose-1,6-diphosphate into PGAL and DHAP.

9. Net ATP gain during glycolysis is —

- A. 1 ATP
- B. 2 ATP
- C. 6 ATP
- D. 8 ATP (B)

Explanation : Four ATP are formed and two ATP are used, so net gain is two ATP.

10. The fate of pyruvic acid depends on —

- A. Oxygen availability
- B. Leaf colour
- C. Amount of chlorophyll
- D. Seed size (A)

Explanation : In presence of O_2 , pyruvate enters mitochondria; in absence of O_2 , fermentation occurs.