



## Class 11 Biology | Respiration In Plants

MCQ WORKSHEET • 15 questions • Choose one correct option • Suggested time: 25 minutes

### 1. Glycolysis takes place in the

- A. Cytoplasm
- B. Mitochondrial matrix only
- C. Nucleolus
- D. Thylakoid lumen

### 2. One glucose molecule yields how many pyruvate molecules in glycolysis?

- A. 3 B. 1 C. 2 D. 6

### 3. The net ATP gain in glycolysis per glucose is

- A. 2 B. 4 C. 8 D. 6

### 4. During alcoholic fermentation, pyruvate ultimately forms

- A. Ethanol and CO<sub>2</sub> B. Only water  
C. Acetyl-CoA and O<sub>2</sub> D. Lactate and O<sub>2</sub>

### 5. Fermentation regenerates NAD<sup>+</sup> mainly to allow continued

- A. Glycolysis B. Calvin cycling  
C. DNA replication only D. Starch transport

### 6. Pyruvate oxidation before the Krebs cycle produces

- A. Acetyl-CoA, CO<sub>2</sub> and NADH  
B. RuBP and NADPH  
C. Glucose and oxygen  
D. Lactate and ATP only

### 7. The Krebs cycle in eukaryotic cells occurs mainly in the

- A. Mitochondrial matrix  
B. Thylakoid membrane  
C. Cytosol  
D. Golgi lumen

### 8. One turn of the Krebs cycle releases

- A. 1 CO<sub>2</sub> B. 2 CO<sub>2</sub> C. 6 CO<sub>2</sub> D. 4 CO<sub>2</sub>

### 9. The final electron acceptor in aerobic respiration is

- A. Pyruvate B. Carbon dioxide  
C. Glucose D. Oxygen

### 10. The respiratory electron transport chain is located in the

- A. Outer chloroplast envelope  
B. Inner mitochondrial membrane  
C. Cell wall  
D. Nuclear envelope

### 11. During oxidative phosphorylation, protons return to the matrix through

- A. RuBisCO B. Amylase  
C. ATP synthase D. DNA polymerase

### 12. The respiratory quotient for complete glucose oxidation is

- A. 0.5 B. 1 C. 2 D. 0

### 13. For most fats, respiratory quotient is

- A. More than 3 B. Exactly 2  
C. Always zero D. Less than 1

### 14. Respiration is called amphibolic because it participates in

- A. Only protein synthesis  
B. Photosynthesis alone  
C. Both breakdown and biosynthesis  
D. Only fermentation

### 15. If oxygen supply stops, the Krebs cycle eventually slows because

- A. NADH cannot be efficiently reoxidised by the ETC  
B. All pyruvate becomes oxygen  
C. ATP synthase begins DNA synthesis  
D. Oxygen directly splits glucose in glycolysis

## ANSWER KEY — check after completing all 15 questions

1.A 2.C 3.A 4.A 5.A 6.A 7.A 8.B 9.D 10.B 11.C 12.B 13.D 14.C 15.A