

Chapter – 11 | Photosynthesis in Higher Plants

QUIZ
PART-07

1. Photorespiration occurs in the presence of —
A. Light
B. Complete darkness only
C. No oxygen
D. No chlorophyll (A)

Explanation : Photorespiration is a light-dependent process in green plants.

2. Photorespiration mainly occurs in —
A. C₄ plants only
B. C₃ plants
C. Fungi
D. Bacteria only (B)

Explanation : Photorespiration occurs mainly in C₃ plants and is absent in C₄ plants.

3. Photorespiration involves uptake of —
A. CO₂
B. O₂
C. Nitrogen
D. Methane (B)

Explanation : In photorespiration, oxygen is absorbed and organic matter is oxidized.

4. In photorespiration, which gas is released?
A. CO₂
B. O₂
C. H₂
D. N₂ (A)

Explanation : CO₂ is released during oxidation of organic matter.

5. RuBisCO can bind with —
A. Only CO₂
B. Only O₂
C. Both CO₂ and O₂
D. Only nitrogen (C)

Explanation : RuBisCO acts as both carboxylase and oxygenase.

6. Photorespiration takes place in —
A. Chloroplasts, peroxisomes and mitochondria
B. Only nucleus
C. Only cell wall
D. Only vacuole (A)

Explanation : The PPT mentions these three organelles in photorespiration.

7. Photorespiration is also called C₂ cycle because first formed compound is —
A. Two-carbon phosphoglycolate
B. Four-carbon OAA
C. Three-carbon PGA
D. Six-carbon glucose (A)

Explanation : A two-carbon compound is formed when RuBP reacts with O₂.

8. Blackman's law of limiting factors applies to —
A. Photosynthesis
B. Digestion only
C. Excretion only
D. Cell division only (A)

Explanation : Photosynthesis depends on many factors, and the least available factor limits the rate.

9. Photosynthetically Active Radiation is approximately —
A. 100–200 nm
B. 400–700 nm
C. 800–900 nm
D. 900–1100 nm (B)

Explanation : Photosynthesis occurs in the visible PAR range.

10. Very high light intensity may reduce photosynthesis because of —
A. Photooxidation of chlorophyll
B. Formation of more starch
C. Increase in chlorophyll only
D. Absence of oxygen (A)

Explanation : Excess light can break down chlorophyll and reduce photosynthesis.