

# 8.3 Photosynthesis

## Question Paper

Course	DP IB Biology
Section	8. Metabolism, Cell Respiration & Photosynthesis (HL Only)
Topic	8.3 Photosynthesis
Difficulty	Easy

**Time allowed:** 10  
**Score:** /5  
**Percentage:** /100

### Question 1

Which of the following correctly identifies the location of the light-dependent reactions?

- A. In the stroma of the chloroplast
- B. In the thylakoid intermembrane space
- C. On the outer membrane of the mitochondria
- D. On the outer membrane of the chloroplast

[1 mark]

### Question 2

Which of the following would be a suitable definition for the term 'photolysis'?

- A. The splitting of water molecules using light energy
- B. The splitting of an oxygen molecule into oxygen atoms
- C. The splitting of water into protons, neutrons and oxygen
- D. The splitting of water by means of hydrolysis reactions

[1 mark]

### Question 3

Which of the following would **not** be considered an adaptation of chloroplasts to photosynthesis?

- A. The granal stacks create a large surface area for the maximum absorption of light by the photosystems
- B. The presence of ribosomes allows for the formation of the necessary polysaccharides involved with photosynthesis
- C. The chloroplast DNA contains genes coding for proteins and enzymes used in photosynthesis
- D. The stroma contains enzymes that catalyse the reactions of the light-independent stage

[1 mark]

**Question 4**

During which of the following processes does carbon fixation occur?

- A. Light dependent reactions
- B. Photolysis
- C. Calvin cycle
- D. Chemiosmosis

[1 mark]

**Question 5**

Which of the following scientists conducted experiments that explained the conversion of carbon into carbohydrates during photosynthesis?

- A. Martin Kamen
- B. Samuel Ruben
- C. Peter Mitchell
- D. Melvin Calvin

[1 mark]