

4 Photosynthesis is a two-stage process by which plants fix carbon dioxide.

(a) Describe the light-dependent reactions of photosynthesis.

(5)

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(b) The products of the light-dependent reactions are used in the light-independent reactions.

(i) In which part of the chloroplast do the light-independent reactions take place? (1)

- A envelope
- B granum
- C stroma
- D thylakoid

(ii) What is the name of the enzyme used by plants to fix carbon dioxide? (1)

- A GALPase (glyceraldehyde-3-phosphatase)
- B GPase (glycerate-3-phosphatase)
- C RUBISCO (ribulose biphosphate carboxylase/oxygenase)
- D RuBPase (ribulose biphosphatase)

(iii) Which of the following is the immediate product of the light-independent reactions of photosynthesis? (1)

- A glucose
- B GP
- C RuBP
- D starch

(Total for Question 4 = 8 marks)

