

Foundation Combined — only core Foundation content included.

**Q1. Write the word equation for photosynthesis and state where it occurs.**

[2 marks]

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**Q2. Describe how light intensity, CO<sub>2</sub> concentration and temperature each affect the rate of photosynthesis.**

[4 marks]

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**Total: 6 marks**

**Q1 (2 marks)**

*Write the word equation for photosynthesis and state where it occurs.*

- $\text{CO}_2 + \text{water} \rightarrow \text{glucose} + \text{oxygen}$  (light energy required) [1]
- Chloroplasts [1]

**Q2 (4 marks)**

*Describe how light intensity,  $\text{CO}_2$  concentration and temperature each affect the rate of ph...*

- Light intensity: increases rate until another factor is limiting [1]
- $\text{CO}_2$  concentration: increases rate until another factor is limiting [1]
- Temperature: increases rate to optimum then decreases sharply (enzyme denaturation above optimum) [1]
- At any point: one factor is limiting — controls the rate [1]