

**Photosynthesis A-level Questions: Practice**

- 1) Describe the fate of carbon dioxide in the calvin cycle? (4)
- 2) State the differences between non-cyclic and cyclic photophosphorylation? (6)
- 3) What is the purpose of the photosystems in the light dependent reaction? (2)
- 4) Explain the role of NADP and Rubisco in photosynthesis? (4)
- 5) Describe the structure of a chloroplast with a labelled diagram? (5)
- 6) Explain the term chemiosmosis and how is it important in the light dependent reaction? (4)
- 7) What role does photolysis play in the light dependent reaction? (4)
- 8) Explain the roles of the E.T.C and ATP synthase in photosynthesis? (4)
- 9) Explain why the light independent reaction cannot take place without NADPH? (2)
- 10) What is the purpose of RUBP? (2)
- 11) Explain the significance of cyclic photophosphorylation? (2)
- 12) What is the optimum temperature and CO<sub>2</sub> concentration for photosynthesis? (2)
- 13) State the differences between primary and accessory pigments? (2)
- 14) What are the wavelengths absorbed by photosystems 1 and 2? (2)
- 15) What is the reason why red light is the best light for photosynthesis? (2)
- 16) What part of the LDR consumes energy and why? (2)
- 17) Draw a summarised diagram to depict the LDR? (6)
- 18) Why do plants show different colours? (2)
- 19) What is the purpose of the electrons released from photolysis? (2)
- 20) Why are 6 calvin cycles need to produce one glucose? (2)
- 21) How much ATP is needed to produce one glucose molecule by photosynthesis and why? (3)