1. Give a brief explanation of the division of photosynthesis into light and dark stages.

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1. What do the letters ATP stand for? In which of the stages of photosynthesis does ATP form?

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1. Energised electrons play a central role in ATP formation during photosynthesis. What is an energised electron?

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1. In which stage of photosynthesis does carbon dioxide provide carbon for carbohydrate formation?

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1. ATP is an abbreviation. What does it stand for?

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1. Explain briefly the role of ATP in the energy exchanges of a cell.

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1. The first stage of photosynthesis is commonly known as the light-dependent stage. It involves the energising of electrons and their subsequent passage along two possible pathways. Give an account of what happens on each of these pathways.

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1. What is the fate of each of the products of the light-dependent stage?

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1. Why is the dark stage given the alternative name of the light-independent stage?

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1. Name a gas that is essential for the dark stage.

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1. Two products of the light stage are vital for the dark stage. Name each of them and state the precise role in the dark stage of each of them.

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1. To what group of biomolecules do the main products of the dark stage belong?

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1. What happens to water molecules when they reach the sites of photosynthesis?

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1. State a precise role for each of the following in photosynthesis: Carbon dioxide; Water

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1. During photosynthesis oxygen is produced. (i) From what substance is oxygen produced? (ii) In which stage of photosynthesis is oxygen produced? (iii) Give two possible fates of oxygen following its production.

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1. Give an account of the role of each of the following in photosynthesis: (i) ATP, (ii) NADP.

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1. Where in a plant cell does photosynthesis take place?

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1. Give the alternative name of the first stage of photosynthesis.

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1. During the first stage of photosynthesis energised electrons enter two pathways. (i) Where do the energised electrons come from? (ii) Briefly describe the main events of each of these pathways.

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1. In the second stage of photosynthesis compounds of the general formula Cx(H2O)y are formed. What name is given to this group of compounds?

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1. From which simple compound does the plant obtain the H used to make compounds of general formula Cx(H2O)y?

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1. Name the simple compound that supplies the necessary energy for the second stage reactions.

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1. Give the name of the first stage of photosynthesis.

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1. In the first stage of photosynthesis, pathways I and II relate to the passage of energised electrons. 1. Explain what happens to these electrons in pathway I. 2. Describe the events of pathway II.

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1. Give the name of the second stage of photosynthesis.

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1. Explain why the second stage of photosynthesis is given its name.

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1. Give one reason why the second stage of photosynthesis cannot happen without the first stage.

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1. Outline the major events of the second stage of photosynthesis.

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1. Write notes (a minimum of three points) on: ADP.

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