B8 Photosynthesis

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| Question No | Mark |
| 1 |  |
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Name ………………………………………..

Class ………………………………………..

Teacher ……………………………………..

%....................... Grade ……………….

* 1. What is the correct word equation for photosynthesis ?

**A** carbon dioxide + glucose 🡪 oxygen + water

**B**  light + carbon dioxide 🡪 glucose + oxygen

**C** water + carbon dioxide 🡪 glucose + oxygen

**D** water + oxygen 🡪 carbon dioxide + glucose

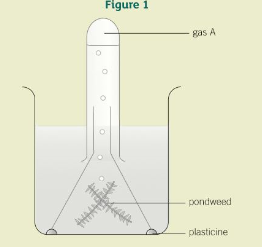
[ 1 mark ]

* 1. Write down the chemical symbol for glucose ………………………. [ 1 mark ]
  2. Photosynthesis is an endothermic reaction.

What does this statement mean ? ..……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………[ 2 marks ]

* 1. Give **two** reasons why photosynthesis in plants is essential for the survival of animals. .…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..[ 2 marks ]

02 **Figure 1** shows the apparatus used to measure the rate of photosynthesis.



02.1 Name gas A ……………………………………………………………………………..[ 1 mark ]

02.2 Suggest why the funnel is supported on pieces of plasticine.

…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….[2 marks ]

02.3 Describe how the apparatus is used to measure the rate of photosynthesis.

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02.4 Give **three** factors that could affect the rate of photosynthesis in the pondweed.

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1. Read the following method used to test a leaf for the presence of starch.

**Step 1** Put the leaf in boiling water for 1 minute.

**Step 2** Transfer the leaf into boiling ethanol for 5 minutes.

**Step 3** Wash the leaf in hot water.

**Step 4** Spread the leaf on a white tile and cover it with iodine solution.

03.1 Explain the purpose of each step in the method.

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03.2 Describe **two** safety precautions you should take in **step 2.**

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………………………………………………………………………………………………………………………..………………………………………………………………………………………………………....[ 2 marks]

**Figure 2** shows a leaf that is part green and part white. It has been removed from a plant that has been in bright light.



03.3 The leaf is tested for the presence of starch.

The green part of the leaf is stained black. The white part of the leaf is stained orange.

What conclusion could you make from this result ?

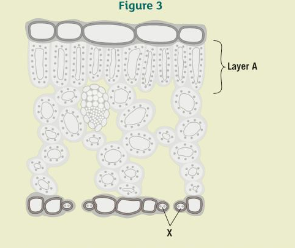
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1. Plants need to make starch. Starch is used as a food storage product.

Describe how plants make starch from simple raw materials.

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05 **Figure 3** shows a section through a leaf.



**Layer A** is the main photosynthetic layer in the leaf.

05.1 What is the name of **Layer A ? ............................**………………………………………………………………………………[ 1 mark ]

05.2 Describe how **Layer A** is adapted for photosynthesis.

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05.3 What are the cells labelled **X** called ?

………………………………………………………………………………………………………………………………………………………………………………………………………………………………….. [ 1 mark ]

05.4 Describe the function of these cells.

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