

AQA, OCR, Edexcel

GCSE Science

GCSE Biology

Photosynthesis Reaction Answers

Name:

M M E

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Total Marks: /21

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Q1: Give a definition of photosynthesis.

A= Process plants use to convert carbon dioxide, water and light to produce food.

(1 mark)

Q2: What cell component takes in light from the environment?

A= Chloroplasts

(1 mark)

Q3: What by-product of photosynthesis do animals use?

A= Oxygen

(1 mark)

Q4: State the word equation for photosynthesis.

A= 1 mark for 1st half of equation/ 1 mark for by products of equation

Carbon Dioxide + Water \longrightarrow Glucose + Oxygen

(2 marks)

Q5: How do plants store excess glucose?

A= Starch

(1 mark)

Q6: Photosynthesis is an exothermic reaction. Explain what this means.

A= requires an energy input from the environment.

(1 mark)

Q7: Discuss how a leaf is adapted to maximise photosynthesis.

A= Any 5 of the following:

- Broad leafs/ Large surface area
- Thin leaves
- Contain chlorophyll
- Veins – bring water/ remove products of photosynthesis
- Air spaces – allow oxygen to leave the plant
- Ground cells – regulate gas exchange

(5 marks)

Q8: How are algae adapted to photosynthesise in water?

A= Take in carbon dioxide dissolved in water.

(1 mark)

Q9: Explain how the presence of starch can be detected in plants.

A= 1 mark each point

- Use iodine solution
- Blue/ Black

(2 marks)

Q10: Design an experiment; students can use to show a plant is photosynthesising.

A= Accept any 6 of the following:

- Use water plant
- Collection chamber over plant
- Leave to collect gasses
- Collect bubbles
- Use a glowing splint over gas collected
- Rich oxygen – will relight splint
- If doesn't not photosynthesising.

(6 marks)