

Pearson Edexcel GCSE (9-1) Biology

Paper 2: Plant Structures, Animal Coordination, Exchange & Transport, Ecosystems (Topics 6–9)

Foundation Tier — Separate Science · Time: 1 hour 45 minutes · Total: 100 marks

Foundation Tier — Separate Science

Name:	
Centre number:	Candidate number:

- Answer **ALL** questions.
- Use black ink or black ball-point pen.
- Write your answers in the spaces provided.
- The marks for questions are shown in brackets.
- Total marks: 100

Question 1

(a) What is transported in the xylem vessels of a plant?

[1 mark]

Tick **ONE** box.

- A. Glucose
- B. Sucrose and amino acids
- C. Water and mineral ions
- D. Carbon dioxide

(b) What is the role of insulin in the body?

[1 mark]

Tick **ONE** box.

- A. Raises blood glucose concentration
- B. Lowers blood glucose concentration
- C. Converts glycogen to glucose
- D. Stimulates adrenaline production

(c) Which of the following is a greenhouse gas?

[1 mark]

Tick **ONE** box.

- A. Nitrogen
- B. Oxygen
- C. Methane
- D. Hydrogen

(d) Which structure in a leaf allows gas exchange?

[1 mark]

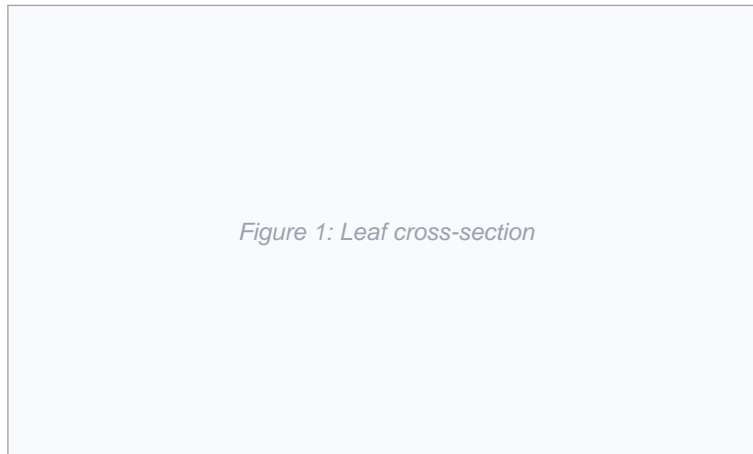
Tick **ONE** box.

- A. Xylem vessel
- B. Chloroplast
- C. Stoma
- D. Palisade cell

Total for Question 1

Question 2

Figure 1 shows a section through a leaf.



(a) Name THREE adaptations of a leaf for photosynthesis and state the function of each.

[3 marks]

(b) Describe the differences between xylem and phloem vessels in plants.

[3 marks]

Total for Question 2

Question 3

Diabetes is a condition affecting blood glucose control.

(a) Describe what happens in the body when blood glucose rises above normal. Name the hormone involved.

[3 marks]

(b) Compare Type 1 and Type 2 diabetes. Give ONE difference in cause and ONE difference in treatment.

[3 marks]

Total for Question 3

Question 4

The heart pumps blood around the body.

(a) Compare the structure of arteries, veins and capillaries.

[3 marks]

(b) Describe how the alveoli in the lungs are adapted for efficient gas exchange. Give THREE adaptations.

[3 marks]

(c) Explain why the left ventricle has thicker walls than the right ventricle.

[2 marks]

Total for Question 4

Question 5

This question is about ecosystems and the impact of human activity.

(a) Define the term "biodiversity."

[1 mark]

(b) Describe the process of eutrophication. Explain how it results from agricultural practices.

[4 marks]

(c) State THREE consequences of deforestation.

[3 marks]

Total for Question 5

Question 6

(a) State the word equation for aerobic respiration.

[2 marks]

(b) Explain the role of decomposers in the carbon cycle.

[3 marks]

(c) Describe and explain how human activities are causing a loss of biodiversity. Include at least THREE different activities in your answer.

[6 marks]
