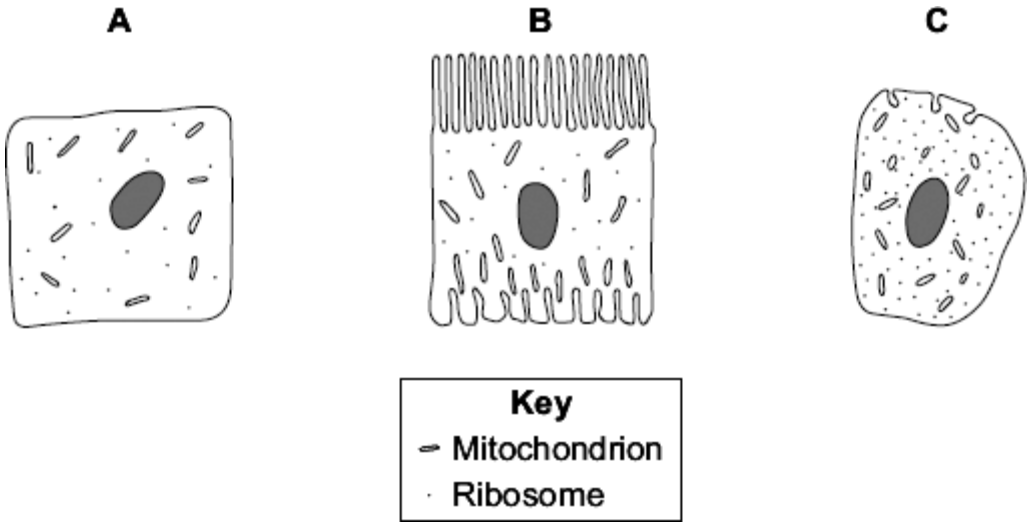
Practice Question Set For GCSE
Subject : Biology
Paper-1 Topic: B1 Cell Biology

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Name of the Student:_____
Max. Marks : 20 Marks **Time : 20 Minutes**

Q1.

Diagrams **A**, **B** and **C** show cells from different parts of the human body, all drawn to the same scale.



(a) Which cell, **A**, **B** or **C**, appears to have adaptations to increase diffusion into or out of the cell? ☐

Give **one** reason for your choice.

_____

_____

(1)

(b) (i) Cell **C** is found in the pancreas.

Name **one** useful substance produced by the pancreas.

_____

(1)

(ii) Use information from the diagram to explain how cell **C** is adapted for producing this substance.

_____

_____

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_____

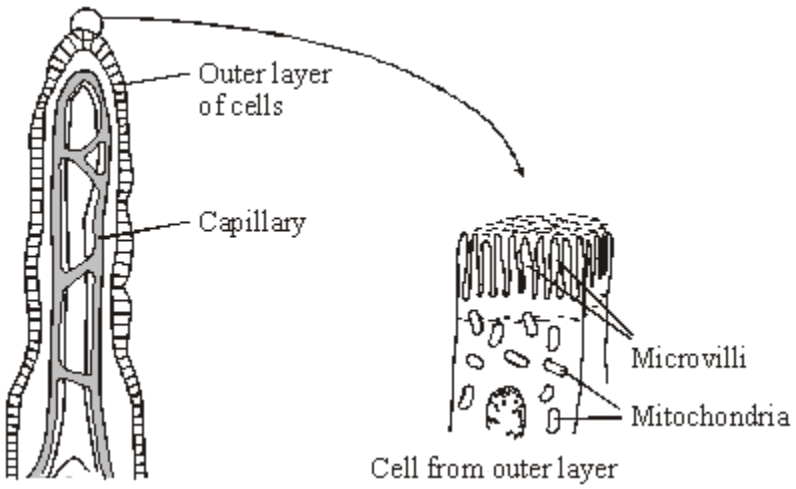
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(2)
(Total 4 marks)

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Q2.

The small intestine is lined with millions of villi.
The diagram shows the structure of a villus.



In the small intestine, some of the products of digestion are absorbed into the blood by *active transport*.

(a) Explain what is meant by *active transport*.

_____

_____

_____

_____

(2)

(b) How do microvilli and mitochondria help in the active transport of the products of digestion from the small intestine into the blood?

Microvilli _____

_____

Mitochondria _____

_____

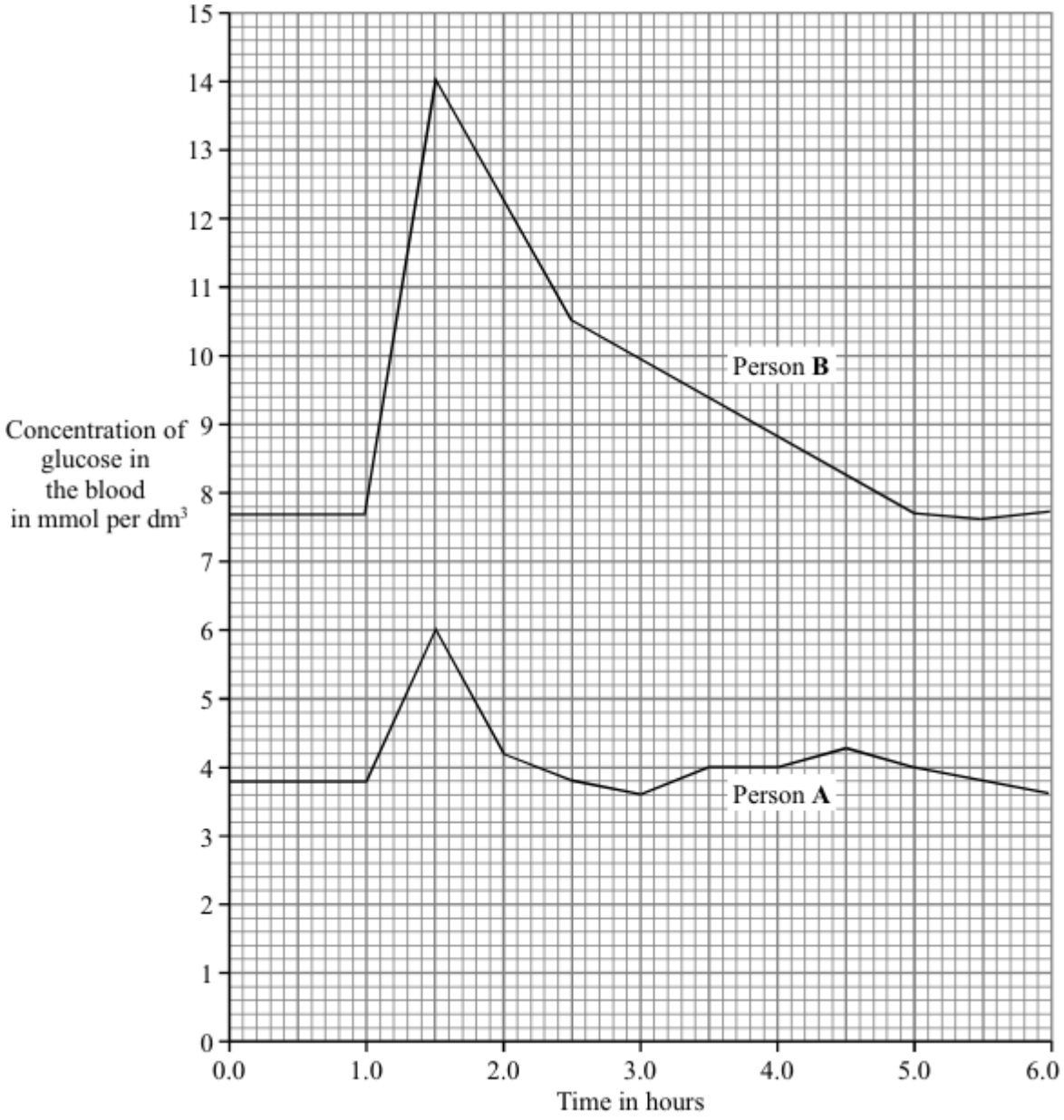
(2)

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Q3.

The graph shows the concentration of glucose in the blood of two people. Person **A** is a non-diabetic. Person **B** has diabetes. Each person ate 75 grams of glucose at 1.0 hours.



(a) (i) What was the maximum concentration of glucose in the blood of Person **A**?

_____ mmol per dm^3

(1)

(ii) After eating the glucose, how long did it take for the concentration of glucose in the blood of Person **B** to return to normal?

_____ hours

(1)

(b) A diabetic person does not produce enough insulin.

(i) Which organ produces insulin?

_____

(1)

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(ii) Write the letter **X** on the graph to show one time when the blood of Person **A** would contain large amounts of insulin.

(1)

(c) A high concentration of glucose in the blood can harm body cells as a result of osmosis. Explain why.

_____

_____

_____

_____

_____

_____

_____

(4)

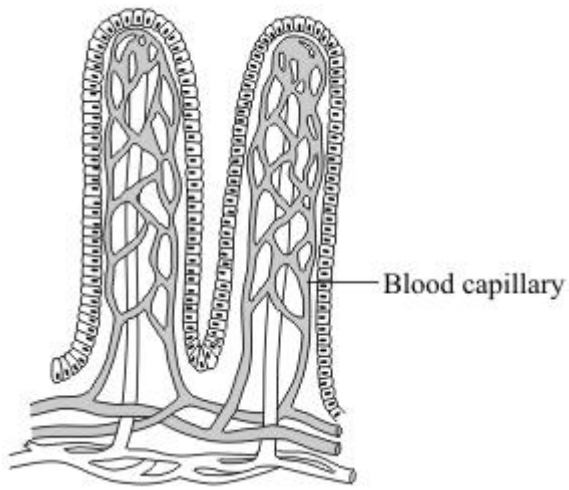
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Q4.

Diagram 1 shows two villi in the small intestine of a healthy person.

Diagram 1



(a) Describe **two** features of the villi which help the small intestine to function.

1. _____

_____

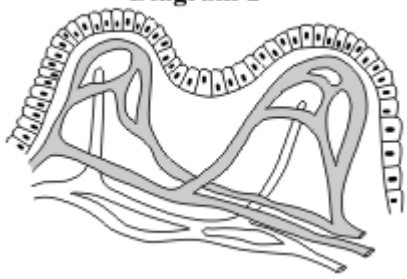
2. _____

_____

(2)

(b) **Diagram 2** shows two villi in the small intestine of a person with coeliac disease.

Diagram 2



(i) How do the villi of the person with coeliac disease differ from those of a healthy person?

_____

_____

(1)

(ii) Suggest how this difference might affect how well the small intestine functions.

_____

_____

(1)

(Total 4 marks)

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