6 Some people can develop a condition called type 2 diabetes. In people with type 2 diabetes, glucose uptake from the blood is decreased. In some cases, the pancreas cannot make enough insulin to keep blood glucose concentration within a healthy range.

(a) A person with type 2 diabetes and a person without type 2 diabetes were given a glucose drink. The blood glucose concentration of each person was measured at regular intervals for 120 minutes.

The results are shown in Fig. 6.1.

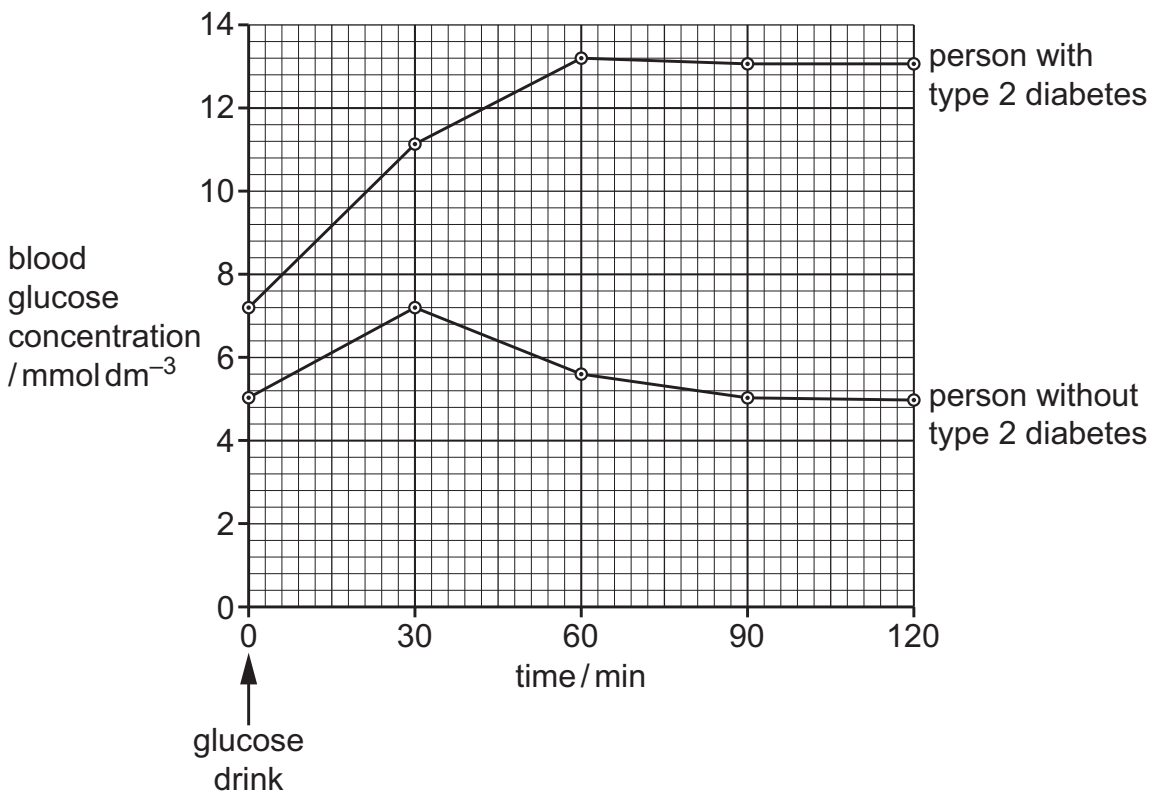

Fig. 6.1

(i) Describe the curve for the person **without** type 2 diabetes.

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(ii) Calculate the percentage increase in blood glucose concentration, between 0 and 60 minutes, for the person **with** type 2 diabetes.

answer ..... [2]

(iii) Suggest ways in which people with type 2 diabetes can help to control their condition.

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(b) Glucagon has a role in the control of blood glucose concentration.

Describe the cell signalling pathway involving glucagon, and describe how this pathway leads to a change in the blood glucose concentration.

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[Total: 13]