

Question Number	Answer	Acceptable answers	Mark
1(a)(i)	substitution (1) $4.8 - 2.6$ $= 2.2$ (%) evaluation (1) $2.2 \times 600\,000$ $= 1\,320\,000$	give full marks for correct answer, no working	(2)

Question Number	Answer	Acceptable answers	Mark
1(a)(ii)	Any two of the following points <ul style="list-style-type: none"> • (increase in people who are) overweight / have a high BMI / are obese (1) • (increased number of people) who do not take enough exercise (1) • increased calorie intake (1) • increase in elderly population (1) 	(Increased number of people) who eat too much / eat the wrong types of food / eat too much fat / sugar / carbohydrates	(2)

Question Number	Answer	Acceptable answers	Mark
1(b)	An explanation including two of the following points <ul style="list-style-type: none"> • diet to lose weight (1) • reduce the amount of carbohydrates / glucose (1) • take more exercise so reduce blood glucose levels (1) 	accept sugar for glucose	(2)

Question Number		Indicative Content	Mark
QWC	*1(c)	<p>An explanation linking some of the following points</p> <p>When blood glucose is high</p> <ul style="list-style-type: none"> • insulin is released from the pancreas • the insulin converts the excess glucose • into glycogen • which is stored in the liver • blood glucose levels are reduced <p>When blood glucose levels are low</p> <ul style="list-style-type: none"> • glucagon is released from the pancreas • the glucagon converts glycogen • from the liver • into glucose • blood glucose levels are raised <p>This is a homeostatic mechanism which maintains the correct glucose levels in the bloodstream</p>	(6)
Level	0	No rewardable content	
1	1 - 2	<ul style="list-style-type: none"> • a limited explanation of blood glucose regulation including the role of hormones, specific hormones do not need to be mentioned • the answer communicates ideas using simple language and uses limited scientific terminology • spelling, punctuation and grammar are used with limited accuracy 	
2	3 - 4	<ul style="list-style-type: none"> • a simple explanation of blood glucose regulation including the role of insulin or glucagon and some of the body organs involved • the answer communicates ideas showing some evidence of clarity and organisation and uses scientific terminology appropriately • spelling, punctuation and grammar are used with some accuracy 	
3	5 - 6	<ul style="list-style-type: none"> • a detailed explanation of blood glucose regulation including the role of the liver and pancreas and the methods of reducing and raising blood glucose concentrations • the answer communicates ideas clearly and coherently uses a range of scientific terminology accurately • spelling, punctuation and grammar are used with few errors 	