

8A Food and nutrition

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Q1

Part	Step	Answer	Mark scheme
	2nd	A respiration	1 mark

Q2

Part	Step	Answer	Mark scheme
	3rd	grind it up/bite parts of it off/mix it with saliva	1 mark

Q3

Part	Step	Answer	Mark scheme
	3rd 3rd	Any two from: carbohydrate, starch, sugar, protein, vitamins. (Accept: phonetic misspellings, such as carbihidrat, vitimin, proteen) (Do not accept: fibre, water, fats, minerals)	2 marks – 1 mark for each

Q4

Part	Step	Answer	Mark scheme
	4th	because she is using diet to mean everything that she eats	1 mark

Q5

Part	Step	Answer	Mark scheme
a	4th	B 12%	1 mark
b	4th	any milk product (e.g. milk, cheese, butter, cream)	1 mark

Q6

Part	Step	Answer	Mark scheme
a	4th 5th	At Step 4: His food now contains more energy than he needs. Or: He does not do so much physical exercise now and so needs less energy.	2 marks – 1 mark for either point at Step 4, 1 mark for the Step 5 point

		At Step 5: Older people need less energy.	
b	4th	If the sugar is not needed by the body, it is turned into fat for storage.	1 mark
c	5th	People who are very overweight can suffer from health problems such as heart disease, diabetes, high blood pressure. (Accept: any one of the named health problems)	1 mark

Q7

Part	Step	Answer	Mark scheme
a	5th 5th	Correct colours: fat (amber), saturated fat (red), sugar (red), salt (amber)	
b	4th 5th	At Step 4: His food now contains more energy than he needs. Or: He does not do so much physical exercise now and so needs less energy. At Step 5: Older people need less energy.	2 marks – 1 mark for either point at Step 4, 1 mark for the Step 5 point
c	4th	If the sugar is not needed by the body, it is turned into fat for storage.	1 mark
d	4th	The word 'light' or the claim '30% reduced fat' might make him think that they are OK to eat and won't make him put on weight.	1 mark
e	5th	People who are very overweight can suffer from health problems such as heart disease, diabetes, high blood pressure. (Accept any one of the named health problems)	1 mark
f	5th	$9000\text{kJ}/1800\text{kJ} = 5$ 1800kJ is contained in 100g of biscuits and so $100\text{g} \times 5 = 500\text{g}$ of biscuits would contain 9000kJ.	1 mark

Q8

Part	Step	Answer	Mark scheme
a	3rd	kilojoules (Accept: phonetic misspellings of joules, such as 'jools', but not of 'kilo')	1 mark

b	3rd	C energy	1 mark
c	4th	One of: meat, poultry, fish, seafood, beans, peas, eggs, soy products, nuts, seeds	1 mark
d	4th	growth and repair (Accept: making new substances)	1 mark
e	4th	It helps food to move easily through the gut. Or: It helps to keep the intestines clean and healthy.	1 mark
f	5th	D water	1 mark

Q9

Part a	Step 5th	Answer to turn it into smaller/soluble molecules that the body can use/absorb	Mark scheme 1 mark
b	5th 5th	Muscles above the food contract, squeezing the food along.	2 marks – 1 mark for muscles squeezing, 1 mark for using the word 'contract' correctly

Q10

Part a	Step 4th 4th 4th	Answer mouth, oesophagus, stomach, small intestine, large intestine, rectum, anus (Do not accept misspellings) (Do not accept: salivary glands, tongue, liver, gall bladder, pancreas - food does not pass through these organs)	Mark scheme 3 marks – 1 mark for copying correct spellings, 1 mark for correct order, 1 mark for correct list of all organs through which food passes
b	5th	to turn it into smaller/soluble molecules that the body can use/absorb	1 mark
c	5th 5th	Muscles above the food contract, squeezing the food along.	2 marks – 1 mark for muscles squeezing, 1 mark for using the word 'contract' correctly

Q11

Part a	Step 6th	Answer One of: making useful substances/vitamins for the body, digesting foods that the body cannot digest	Mark scheme 1 mark
b	7th 7th 7th	All particles are constantly moving and so some will move by chance into the bacterium. The food can only pass through the gaps in the outer covering of the bacterium when it is small enough (i.e. after digestion). There is an overall flow of food particles from where there are many of them to where there are fewer of them (i.e. inside the bacterium). This is called diffusion. <i>In feedback to students, comment upon their grammar and structuring of their answers.</i>	3 marks – 1 mark for each of the points, up to a total of 3
c	7th 7th	It would increase the speed of this process, because there is now a greater surface area.	2 marks – 1 mark for each point
d	7th 7th	The small intestine of a healthy person absorbs more glycine/absorbs glycine more quickly because there is more surface area. OR The man cannot absorb glycine and other products of digestion very well because there is less surface area. AND So is not getting enough protein/nutrients to maintain a healthy weight.	2 marks – 1 mark for each point

Q12

Part	Step 7th	Answer Vitamin C is needed for cells/tissues to stick together properly. If they don't stick together then blood can flow out between them.	Mark scheme 1 mark
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Q13

Part	Step	Answer	Mark scheme
a	5th	C starch	1 mark
b	6th	A enzyme	1 mark
c	8th	35 °C	1 mark

Overall Mark	/46
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