OCR GCSE GATEWAY BIOLOGY A · J247

BIOLOGY



MARK SCHEME

B1.3 RESPIRATION

SCORE	PERCENTAGE
/137	%

STEMUP

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Question			Answer/Indicative content	Marks	Guidance
1			A	1	
			Total	**1**	
2			C	1	
			Total	**1**	
3			B	1	
			Total	**1**	
4			D	1	
			Total	**1**	
5			B	1	
			Total	**1**	
6	a		oxygen (1)	1	
	b		respiration (is also occurring) (1) some oxygen is used up (in respiration) / AW (1)	1 1	**allow** idea that oxygen given out is the net production
			Total	**3**	
7			produces acids (1) but produces fatty acids (2)	2	
			Total	**2**	
8			above 60 °C the enzymes in the decomposers had denatured (1) below 30 °C the enzymes in the decomposers were working too slowly (1)	1 1	
			Total	**2**	
9			produces acids = (1) but produces fatty acids = (2)	2	
			Total	**2**	
10			above 60 °C the enzymes in the decomposers had denatured (1) below 30 °C the enzymes in the decomposers were working too slowly (1)	1 1	

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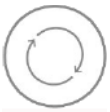
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Question			Answer/Indicative content	Marks	Guidance
			Total	2	
11			more respiration occurs (1) carbon dioxide is toxic (1)	2	 **allow** poisonous / changes pH **ignore** harmful **Examiner's Comments** Many candidates referred to breathing, anaerobic respiration, lactic acid production etc. but few simply said that the respiration rate will increase.
			Total	2	
12	a	i	allows the animals to be **compared** (1)	1	
		ii	the metabolic rate is an indication of the rate of respiration (1) oxygen is needed for (aerobic) respiration (1)	2	**BUT** the more oxygen consumption the more respiration for a higher metabolic rate (2)
	b	i	2.5 (1)	1	
		ii	the shrew needs / uses lots of oxygen (1) shrew red blood cell has a large surface area to volume ratio (1) this means that it can pick up / release oxygen **quickly** (1)	3	 **ignore** references to shrew's body surface area to volume ratio **ignore** pick up more oxygen
			Total	7	

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Question			Answer/Indicative content	Marks	Guidance
13			Any two from strain B produces alcohol faster / strain B produces more alcohol / ora (1) strain A is less tolerant (to alcohol) /ora (1) increases in alcohol levels result in a slowdown of production / fermentation rate slows as alcohol levels increase (1)	2	allow faster fermentation for strain B/ora (1) ignore references to specific gravity allow strain A is less resistant (to alcohol) /ora (1) allow yeast is killed in higher levels of alcohol (1)
			Total	2	
14			A ✓	1 (AO 1.1)	
			Total	1	
15			B ✓	1 (AO 2.2)	Examiner's Comments The assessment was designed to assess candidates' practical knowledge, AO2.2. By far the most common response was 'A' Benedict's reagent. Clearly candidates are used to using this reagent, but it is evident that few had any recognition of using Biuret reagent.  Candidates had a lack of knowledge of how to test for protein and this needs to be developed.
			Total	1	

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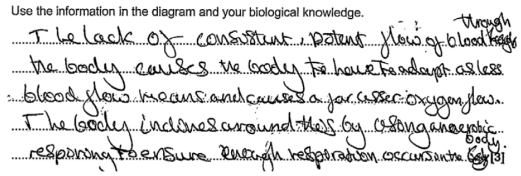
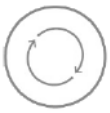
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Question			Answer/Indicative content	Marks	Guidance
16			**Any two from:** make sure there is plenty of food available (1) (control) pH (1) remove (waste) products (1)	2	**ignore** temperature **allow** control food availability (1) **ignore** water / moisture **allow** remove alcohol / toxins (that is produced)/(1) **ignore** control levels of alcohol **extra marking points** **allow** remove oxygen / maintain anaerobic conditions (1) **allow** maintain aseptic conditions / prevent contamination (1)
			Total	2	

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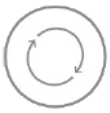
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Question			Answer/Indicative content	Marks	Guidance
17			blood vessels / arteries are blocked/narrowed ✓ (heart muscle) gets less blood ✓ (heart muscle) gets less oxygen ✓	3 (AO 2.1)	ALLOW atheroma / plaque formed IGNORE no blood IGNORE no oxygen IGNORE references to blood circulation to body cells <u>Examiner's Comments</u> Over half of candidates scored at least one mark here mainly for less blood flow (to the heart muscle). A lot of candidates got confused with the blood flow to the heart muscle with blood flow to the body cells, therefore not gaining credit. Exemplar 8 demonstrates this confusion and is not credited any marks. Exemplar 8  Use the information in the diagram and your biological knowledge. The lack of consistent, potent flow of blood through the body causes the body to have to adapt as less blood flow means and causes a increase oxygen loss. The body indirectly around this by using anaerobic respiring to ensure enough respiration occurs in the body. [3]
			Total	3	
18			B	1 (AO 2.1)	<u>Examiner's Comments</u>  AfL Very few candidates answered this challenging AO2.1 question correctly. Again, several did so by writing the number in the answer box rather than the letter. Candidates who wrote 2 were credited but it is something they should be encouraged to avoid and to only use letters A, B, C or D.
			Total	1	

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Question			Answer/Indicative content	Marks	Guidance
19	a		alcohol / ethanol **and** carbon dioxide ✓	1 (AO 1.1)	**ALLOW** either order **ALLOW** correct formulae Examiner's Comments In this AO1.1 recall question, candidates seemed to either know this or got both products incorrect.
	b		**Any two from:** alcohol produced in yeast (not humans) / ORA✓ lactic acid produced by humans (not yeast) / ORA✓ carbon dioxide produced by yeast (not humans) / ORA✓	2 (AO 1.1)	If any incorrect product is stated, then max 1 mark. If yeast or humans are not stated assume answer refers to yeast **IGNORE** reference to oxygen debt / ATP production Examiner's Comments In general, if candidates had scored a mark on (a), they often scored marks for this AO1.1 question as well. Some candidates managed to write enough to score 1 mark, as they knew humans produced lactic acid. However, quite a few thought yeast was a plant, or that oxygen was produced.
	c	i	sucrose ✓	1 (AO 3.2a)	Examiner's Comments Candidates in the main were able to interpret the graph in this AO3.2 question.
		ii	**FIRST CHECK THE ANSWER ON ANSWER LINE** **If answer = 12 award 2 marks** 6.0 ÷ 0.5 ✓ = 12 ✓	2 (AO 2.2)	Examiner's Comments  **AfL** This AO2.2 question was reasonably well answered. However, because candidates often did not include working out they often scored 2 marks or nothing. Several candidates did a subtraction, 6 - 0.5 rather than dividing. This is another example of where a candidate who is encouraged to show their working out may well obtain at least 1 mark rather than none.

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Question			Answer/Indicative content	Marks	Guidance
		iii	glucose ✓	1 (AO 3.2a)	<u>Examiner's Comments</u> Candidates in the main were able to interpret the graph in this AO3.2 question.
		iv	(Yeast B) doesn't ferment fructose ✓ (Yeast B) produces some fermented products ✓	2 (AO 3.1a)	**ALLOW** (Yeast B) does not use up fructose / fructose levels decrease slightly / fructose levels remain high / higher yield of fructose / fructose levels remain constant **ALLOW** reverse arguments for Yeast A **DO NOT ALLOW** fructose is produced **ALLOW** fermented products increased **DO NOT ALLOW** fermented products produced from fructose **DO NOT ALLOW** produces high levels of fermented products **IGNORE** fermented product level stays the same / less fermented product than A <u>Examiner's Comments</u> Some candidates did not answer this AO3.1 question. This may be due to it being the last question but could be that they were unsure how to respond. Many candidates who did respond had the right ideas but did not articulate clearly enough, saying that there was more fermented product in yeast B or similar.
			Total	9	

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Question			Answer/Indicative content	Marks	Guidance
20		i	(no) microorganisms (in the soil) ✓ no decay (takes place) ✓	2 (AO 1.1) (AO 2.1)	AW microbes, decomposers, saprophytes, detritivores, bacteria, fungi AW decomposition, rotting, break down ALLOW not enough nitrifying bacteria to replace nitrates / no nitrates released by nitrifying bacteria = 2 IGNORE no organisms to recycle the minerals <u>Examiner's Comments</u> Very few candidates were able to apply their knowledge of microbes and decay to this question, and found it challenging to answer. Many candidates misinterpreted the question and talked about lack of oxygen for life or that Mars is too dry for life. This is demonstrated with Exemplar 4 which was given 0 marks. Exemplar 4 the conditions are different. It is really hot on mars so the soil would dry out. [2]

Question			Answer/Indicative content	Marks	Guidance
		ii	plants release oxygen by photosynthesis ✓ organisms in the soil / microbes / animals release carbon dioxide by respiration ✓	2 (AO 2.2)	ALLOW correct word (or symbol) equations for photosynthesis linked to plants and respiration linked to organisms in the soil / microbes / animals AW microbes, decomposers, saprophytes IGNORE breathe out carbon dioxide IGNORE plants will respire and give out carbon dioxide ALLOW 1 mark for plants release oxygen/photosynthesise and microbes give out carbon dioxide/respire if no other marks are awarded. Examiner's Comments Candidates had to apply their knowledge and understanding of gases given off by plants in photosynthesis and organisms in carrying out respiration to explain why air would no longer needed to be added after a while. Most non-scoring responses were too vague and just stated gases as in the stem of the question.
			Total	4	
21			B	1 (AO 2.1)	
			Total	1	
22			B	1 (AO 1.2)	
			Total	1	
23			A	1 (AO 1.1)	
			Total	1	

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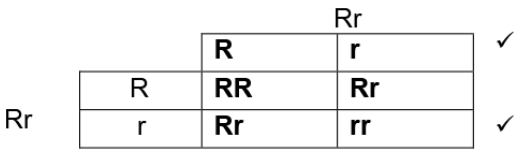
Question			Answer/Indicative content	Marks	Guidance
24	a		alcohol / ethanol **and** carbon dioxide ✓	1 (AO 1.1)	**ALLOW** either order **ALLOW** correct formulae Examiner's Comments This question was well answered by the majority of candidates.
	b		**Any two from:** alcohol produced in yeast (not humans) / ORA✓ lactic acid produced by humans (not yeast) / ORA✓ carbon dioxide produced by yeast (not humans) / ORA✓	2 (AO 1.1)	If any incorrect product is stated, then max 1 mark. If yeast or humans are not stated assume answer refers to yeast **IGNORE** reference to oxygen debt / ATP production Examiner's Comments Although most candidates identified differences in the products formed, there were a number of incorrect references to the energy released by the two processes. One of these is seen in exemplar 2, which only scored one mark. **Exemplar 2** 1 Anaerobic respiration in humans produces lactic acid. 2 Yeast cells produce more energy anaerobically than human muscle cells do. [2]
	c	i	sucrose ✓	1 (AO 3.2a)	Examiner's Comments Most candidates correctly identified the sugar as sucrose.
		ii	**FIRST CHECK THE ANSWER ON ANSWER LINE** **If answer = 12 award 2 marks** 6.0 ÷ 0.5 ✓ = 12 ✓	2 (AO 2.2)	Examiner's Comments Most candidates could extract the correct data from the graph and complete the calculation.

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Question			Answer/Indicative content	Marks	Guidance
		iii	glucose ✓	1 (AO 3.2a)	Examiner's Comments This question proved to be more challenging with both sucrose and fructose being chosen equally as incorrect answers.
		iv	(Yeast B) doesn't ferment fructose ✓ (Yeast B) produces some fermented products ✓	2 (AO 3.1a)	ALLOW (Yeast B) does not use up fructose / fructose levels decrease slightly / fructose levels remain high / higher yield of fructose / fructose levels remain constant ALLOW reverse arguments for Yeast A DO NOT ALLOW fructose is produced ALLOW fermented products increased DO NOT ALLOW fermented products produced from fructose DO NOT ALLOW produces high levels of fermented products IGNORE fermented product level stays the same / less fermented product than A Examiner's Comments The examiners were looking for an understanding that yeast B does not use up as much fructose but still produces some fermented product. A number of candidates stated that fructose is actually produced by yeast B and others claimed that it also produces high concentrations of fermented product. Exemplar 3 makes both of these errors and so does not score. Exemplar 3 Yeast B produced 3.25 g/100ml of fructose in 24 hours which was more than yeast A did at only 0.4 g/100ml. Yeast B also produced 0.5 g/100ml of fermented product which is still high. [2]
			Total	9	

Question			Answer/Indicative content	Marks	Guidance
25	a		clots the blood ✓ prevents bleeding / allows wounds to heal / forms a scab ✓	2 (AO 1.1)	IGNORE clump blood ALLOW prevents pathogens getting into the body <u>Examiner's Comments</u> There was some confusion in the responses describing the role of platelets whereby candidates thought platelets had a role in the specific immune response. Only higher ability candidates gained a mark here.
	b		 ✓ ✓ ratio 3 : 1 ✓	3 (AO 2.1) (AO 3.2b)	correct gametes = one mark correct genotypes of offspring = 1 mark ALLOW ECF for ratio ALLOW 3 in 4 <u>Examiner's Comments</u> The majority of candidates achieved two or three marks correctly identifying the gametes and genotypes. Most went onto correctly identifying the ratio if they achieved the gametes mark. Very few candidates achieved the error carried forward mark.

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Question			Answer/Indicative content	Marks	Guidance
	c		**Any three from:** variation with some rats resistant and some who are not ✓ (resistant rats) more likely to survive/less likely to be killed ORA ✓ (resistant rats more likely) reproduce ORA ✓ pass on the allele / gene for resistance ORA ✓	3 (AO 2.1)	**IGNORE** selective breeding **ALLOW** mutation for resistance **ALLOW** offspring produced / breed together **ALLOW** pass on advantageous gene **IGNORE** trait is passed on / genes are passed on Examiner's Comments Candidates had to apply their knowledge of natural selection to explain why the percentage of resistant rats was increasing. There were a range of marks given for this question. Most none scoring responses were too vague and not using key terms. Most candidates did not appreciate that there was variation for resistance within the population.
	d		**Any two from:** (stops/less) respiration ✓ (no/less) energy/ATP ✓ key process interrupted e.g. cell metabolism/protein synthesis/chemical reactions/active transport ✓	3 (AO 2.1)	Examiner's Comments This question was one of the most challenging application of knowledge and understanding questions. The most common awarded mark was appreciation that energy release would be affected. A lot of responses were very general and would say the rat can't breathe or can't get any oxygen.
			Total	11	

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Question			Answer/Indicative content	Marks	Guidance
26		i	provide energy / release energy / produce ATP ✓	1 (AO1.1)	
		ii	carbon dioxide ✓ water ✓	2 (AO1.1)	ALLOW correct answers in either order ALLOW correct formulae in either order IGNORE oxygen and glucose when shown as reactants IGNORE energy
		iii	exothermic ✓	1 (AO1.1)	
			Total	**4**	
27			A ✓	1 (AO1.1)	
			Total	**1**	
28			fatty acids are obtained by breaking down/digesting larger molecules ✓ idea (originates) from lipids ✓	2 (AO2.1)	ALLOW using lipase / enzyme ALLOW triglycerides ALLOW lipids/fats/oils
			Total	**2**	

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Question			Answer/Indicative content	Marks	Guidance
29	a		to let air / oxygen in ✓ for (aerobic) respiration ✓	2 (AO1 x 2.1) (AO1 x 1.1)	DO NOT ALLOW carbon dioxide DO NOT ALLOW anaerobic respiration
	b		to allow a valid comparison of the results✓	1 (AO3.1b)	
	c	i	correct plots ✓✓ smooth curved line between points ✓	3 (AO3 x 2.2)	ALLOW +/- half a square All correct = 2 marks 3 or 4 plots correct = 1 mark DO NOT ALLOW sketchy line / line thicker than half a square
		ii	increases up to 10 days/70^{o}C ✓ then decreases ✓	2 (AO3.1a)	ALLOW increases up to 9-11 days ALLOW increases by 44^{o}C
		iii	FIRST CHECK THE ANSWER ON ANSWER LINE If answer = 39 (^{o}C) award 2 marks 70-31 ✓ = 39 (^{o}C)✓	2 (AO2.2) (AO1.2)	
		iv	normal compost is made by aerobic respiration✓ aerobic respiration releases more energy than anaerobic respiration✓	2 (AO2 x 2.1)	2 correct ticks = 2 marks 1 correct ticks = 1 mark 3 ticks two correct = 1 mark 3 ticks one correct = 0 marks 4 or more ticks = 0 marks
	d	i	FIRST CHECK THE ANSWER ON ANSWER LINE If answer = 8 (kg) award 3 marks 1500-1200 OR 300 ✓ 300/40 OR 7.5 ✓ = 8 (kg) ✓	3 (AO3 x 2.2)	 ALLOW one mark for clear evidence of rounding incorrect answer correctly to the nearest whole number
		ii	less carbon dioxide is produced ✓	1 (AO3.1b)	ALLOW less contribution to global warming / greenhouse effect / climate change
			Total	16	

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Question			Answer/Indicative content	Marks	Guidance
30			Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. **Level 3 (5–6 marks)** Provides a detailed explanation linking cholesterol to heart disease. **AND** Provides a detailed analysis to explain if this link is supported by the graph. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (3–4 marks)** Provides a detailed explanation linking cholesterol to heart disease. **OR** Provides a detailed analysis to explain if this link is supported by the graph. **OR** Provides a basic explanation linking cholesterol to heart disease. **AND** Provides a basic analysis of the information to explain if this link is supported by the graph. *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* **Level 1 (1–2 marks)** Provides a basic explanation linking cholesterol to heart disease. **OR** Provides a basic analysis of the information to explain if this link is supported by the graph. **OR** Demonstrates knowledge of the importance of the blood supply to the heart muscle. *There is an attempt at a logical structure with a line of reasoning. The information is*	6 (AO2 x 1.1) (AO2 x 2.1) (AO2 x 3.1b)	**AO1.1 Demonstrate knowledge and understanding of the importance of the blood supply to the heart muscle.** • coronary artery carries blood to heart/muscle • blood takes oxygen/glucose to the heart/muscle • heart/muscle carries out aerobic respiration/needs energy • energy is needed for the heart/muscle to contract **AO2.1 Apply knowledge and understanding of the requirements of the heart muscle** • cholesterol build up (partially) blocks the blood flow in the artery • this reduces blood/oxygen/glucose carried to the heart/muscle • heart/muscle carries out less aerobic respiration/less energy released • heart/muscle can't contract as forcefully **AO3.1b Analyse information and ideas to interpret the results on the study** **Support the link:** • men with heart disease had (on average) a higher blood cholesterol level. • Men without heart disease had (on average) a lower blood cholesterol level. • build-up of cholesterol can lead to heart disease **Doesn't support the link:** • considerable overlap between the two groups • men can still have heart disease with low blood cholesterol levels • Men without heart disease can still have high blood cholesterol levels

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Question			Answer/Indicative content	Marks	Guidance
			in the most part relevant. **0 marks** *No response or no response worthy of credit*		
			Total	**6**	
31			B ✓	1 (AO2.1)	
			Total	**1**	
32			peak CO_2 level is close to the peak of ripening chemical level / CO_2 levels increasing as production of chemical increases ✓ process is respiration ✓	2 (AO2 x 3.2b)	**DO NOT ALLOW** there is a spike/peak in CO_2 as the chemical increases **ALLOW** fermentation
			Total	**2**	
33		i	polymers ✓ monomers ✓	2 (AO2 x 1.1)	
		ii	(**A** has) less ADH released/present ORA ✓ so less/no reabsorption of water / permeability of collecting duct is lower/has not changed ✓	2 (AO2 x 2.1)	**ALLOW** ADH release is inhibited in A / lack of ADH production in **A** **IGNORE** less movement of water out of the tubule (must state reabsorption)
		iii	**Any two from:** (low) water potential/(decreased) water levels are detected by hypothalamus ✓ will cause the release of ADH/ increased ADH levels ✓ increased permeability of collecting duct/kidney tubules / increased reabsorption of water (into blood) / decreased urine production / urine will become more concentrated ✓	2 (AO2 x 2.1)	**IGNORE** brain
			Total	**6**	

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Question			Answer/Indicative content	Marks	Guidance
34	a		normal bin has holes to allow in air / oxygen ✓ (making normal compost) so aerobic respiration occurs ✓	2 (AO2.1) (AO1.1)	**ALLOW** converse arguments for bokashi bin **ALLOW** aerobic bacteria carry out respiration **IGNORE** bacteria work aerobically
	b		used the same pile of dead plant material for both composters / used same plant type / used equal mass in both composters ✓	1 (AO2.2)	**ALLOW** used the same time interval for both composters **ALLOW** used the same water/moisture content for both composters **ALLOW** idea of same external conditions e.g. put both in same place / external temperature kept the same / kept in the same environment **IGNORE** references to fair testing
	c	i	Axes – both correctly labelled, including units✓ Axes - even scales occupying more than half of the grid ✓ Plotting - all points correctly plotted ✓ Line - lines labelled or a key ✓ Line - points with curve of best-fit lines ✓	5 (AO5 x 2.2)	Must have time on x-axis and temperature on y-axis **ALLOW** +/- half a square at least 8 points correctly plotted **IGNORE** extrapolated lines
		ii	temperature increased as compost decomposed / bacteria released heat by respiration ✓ temperature starts to drop as decomposition slows down/complete / bacterial respiration slows ✓	2 (AO2 x 2.1)	**ALLOW** rise in temperature due to energy released by respiration ✓ **ALLOW** bacterial activity slows (if respiration already mentioned) **ALLOW** temperature starts to drop as enzymes in respiration denature at high temperatures
		iii	idea that decomposition in bokashi (method) bin much slower ✓ anaerobic respiration releases less heat/energy than aerobic respiration ✓	2 (AO2 x 2.1)	Enter text here.

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Question			Answer/Indicative content	Marks	Guidance
	d	i	FIRST CHECK THE ANSWER ON ANSWER LINE If answer = 27 (%) award 3 marks 400 / 1500 x 100 ✓ 26.6 (%) ✓ = 27 (%) ✓	3 (AO2.2) (AO2.2) (AO1.2)	If answer = 26.6 (%) award 2 marks ALLOW ECF for correct rounding
		ii	 idea that the gas given off is carbon dioxide ✓ less greenhouse gas produced / less likely to result in global warming / less contribution to greenhouse effect ✓	2 (AO2.2) (AO3.1b)	ALLOW for 2 marks less carbon dioxide produced which is a greenhouse gas ALLOW correct formula ALLOW explanations of the greenhouse effect IGNORE references to environmental damage/not environmentally friendly/pollution/not good for the environment
			Total	17	

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Question			Answer/Indicative content	Marks	Guidance
35			Please refer to the marking instructions on page 4 of this mark scheme for guidance on how to mark this question. **Level 3 (5–6 marks)** Demonstrates a knowledge of the importance of the blood supply to the heart. **AND** Applies knowledge to explain why a failure of this blood supply can lead to heart disease. **AND** Analyses the information to explain the link between a lack of LDL protein and heart disease. *There is a well-developed line of reasoning which is clear and logically structured. The information presented is relevant and substantiated.* **Level 2 (3–4 marks)** Demonstrates a knowledge of the importance of the blood supply to the heart. **AND** Applies knowledge to explain why a failure of this blood supply can lead to heart disease. **OR** Demonstrates a knowledge of the importance of the blood supply to the heart. **AND** Analyses the information to explain the link between a lack of LDL protein and heart disease. **OR** Applies knowledge to explain why a failure of this blood supply can lead to heart disease. **AND** Analyses the information to explain the link between a lack of LDL protein and heart	6 (AO2 x 1.1) (AO2 x 2.1) (AO2 x 3.1a)	**AO1.1 Demonstrate knowledge and understanding of the importance of the blood supply to the heart muscle.** • blood in the coronary artery supplies heart muscle • oxygen / glucose is supplied to the muscle • this is needed for the muscle to contract/for respiration **AO2.1 Apply knowledge and understanding of the requirements of the heart muscle** • without oxygen / glucose the heart muscle cannot respire • energy from respiration is needed for the muscle to contract **AO3.1a Analyse information and ideas to interpret the effects of lack of LDL receptor protein.** • without LDL receptor protein there will be more cholesterol in the blood / cholesterol levels will be too high to be removed/broken down • increased build up of cholesterol in the coronary artery will increase the risk of heart disease / decrease blood flow to the heart muscle

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Question			Answer/Indicative content	Marks	Guidance
			disease. *There is a line of reasoning presented with some structure. The information presented is relevant and supported by some evidence.* **Level 1 (1–2 marks)** Demonstrates a knowledge of the importance of the blood supply to the heart. **OR** Applies knowledge to explain why a failure of this blood supply can lead to heart disease. **OR** Analyses the information to explain the link between a lack of LDL protein and heart disease. *There is an attempt at a logical structure with a line of reasoning. The information is in the most part relevant.* **0 marks** *No response or no response worthy of credit*		
			Total	**6**	
36		i	use Benedicts (reagent) ✓ heat / boil ✓ no change in colour / stays blue / does not go red ✓	3 (AO3 x 1.2)	
		ii	Yes (no mark) blood sugar levels will be controlled/not rise ✓ idea of a sugar replacement ✓	2 (AO1 x 3.2a) (AO1 x 2.1)	If No chosen = 0 marks **IGNORE** blood sugar levels will decrease **ALLOW** less sugar eaten
			Total	**5**	

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