AQA GCSE Biology | 8461

SPECIFICATION POINT 4.7.3.6

Maintaining biodiversity

Mark schemes and examiner comments

Tier	**Foundation**
Question groups	**12**
Available paper years	**2007–2021**

Using this booklet

1. Booklet answer numbers match the question booklet.
2. Use the original question number within marking tables.
3. Examiner comments are included where available.

Name: _____ **Date:** _____

Where a precise marking extract is unavailable, the full source document is included in an appendix. Any missing mark scheme is explicitly identified.

4.7.3.6 Maintaining biodiversity

Answer 01 · Mark scheme January 2007 | BLY1F | Original Q7 | Legacy

Question 7

	answers	extra information	mark
(a)	any **two** from: • burning • activity of microbes / microbial respiration • less photosynthesis **or** trees take in CO_2 **or** less CO_2 locked up in wood • CO_2 given off by clearing machinery	ignore CO_2 release unqualified do **not** accept CO_2 taken in for respiration	2
(b)(i)	range of different species	accept idea of variety of organisms or plants or animals	1
(ii)	any **one** from: • organisms may produce substances useful to humans • duty to preserve for future generations • effect on other organisms e.g. food chain effects • loss of environmental indicators	do **not** accept if food is only example ignore effect on human food supply	1
total			4

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Answer 02 · Mark scheme June 2007 | BLY1B | Original Q4 | Legacy

Four	**A**	burning fuels that release sulfur dioxide	**3**
	B	digging a new quarry	**4**
	C	sewage disposal	**2**
	D	using pesticides on crops	**1**

Answer 03 · Mark scheme June 2009 | BLY1BP | Original Q2 | Legacy

Two	**A**	increasing the amount of glass and metal recycled	**2**
	B	increasing the amount of paper recycled	**1**
	C	improving insulation in homes	**4**
	D	extending the railway network	**3**

Answer 04 · Mark scheme June 2010 | BLY1BP | Original Q9 | Legacy

No matching mark scheme was available in the supplied archive for this question.

Answer 05 · Mark scheme January 2011 | BLY1F | Original Q6 | Legacy

Question 6

question	answers	extra information	mark
6(a)	methane		1
6(b)	fertiliser		1
6(c)	fuel		1
6(d)	the greenhouse effect		1
Total			**4**

Answer 05 · Mark scheme January 2011 | BLY1F | Original Q6 | Legacy

BLY1F

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Answer 06 · Mark scheme March 2011 | BLY1BP | Original Q8 | Legacy

Eight	**2**	**2**	**3**	**2**

Answer 07 · Mark scheme June 2011 | BLY1BP | Original Q2 | Legacy

Two	**A**	burning fuels that release carbon dioxide	3
	B	building new houses	4
	C	spraying crops with pesticides	2
	D	using weedkillers on crops	1

Answer 08 · Mark scheme June 2011 | BLY1BP | Original Q8 | Legacy

Eight	**3**	**1**	**3**	**4**

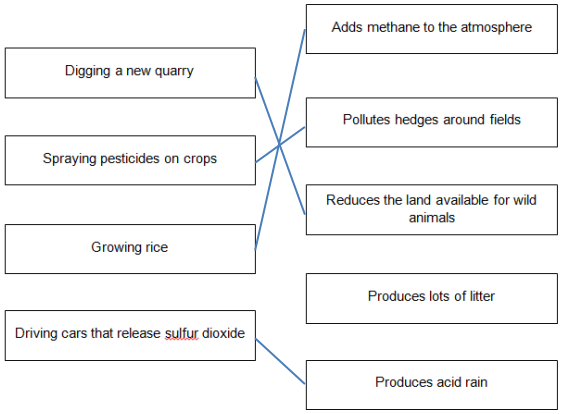
Answer 09 · Mark scheme November 2011 | BLY1BP | Original Q2 | Legacy

Two	**A**	deforestation	**3**
	B	recycling waste	**2**
	C	less cattle farming	**4**
	D	treating sewage	**1**

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Answer 10 · Mark scheme June 2013 | BL3FP | Original Q1 | Legacy

Question 1

question	answers	extra information	mark
1(a)		**1** mark for each correct line extra line from box in left hand column cancels mark	4
1(b)	any **two** from: • climate change • more extreme weather / changes to weather (patterns) / described • rise in sea level • melting of ice caps • reduced biodiversity • changes to migration patterns • changes in distribution of species	ignore 'Earth warmer' accept faster plant growth / tropical species can be grown in UK accept tropical diseases / example spread to temperate regions	2
Total			**6**

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Answer 11 · Mark scheme

June 2019 | 8461/2F | Original Q5

Question	Answers	Extra information	Mark	AO / Spec. Ref.
05.1	Raphus		1	AO2 4.6.4
05.2	any **two** from: • humans hunted / killed / ate the dodo **or** dodo easy to catch • humans ate / collected eggs • humans ate the dodo's food • animals brought by humans ate dodo / eggs • diseases introduced by humans **or** by imported animals • humans destroyed dodo's habitat / nests	allow examples – eg cats / dogs / pigs / rats allow deforestation	2	AO2 4.6.3.6
05.3	any **one** from: • growing crops / biofuels • grazing animals • building houses • quarrying / mining • dumping waste	allow farming / agriculture allow other correct examples – eg building roads	1	AO1 4.7.3.3 4.7.3.4
05.4	there is less photosynthesis the trees are burned		1 1	AO2 4.4.1.1 4.4.1.2 4.7.3.4 4.7.3.5
05.5	increase		1	AO1 4.7.3.5
05.6	9 × 30 270	an answer of 270 scores **2** marks	1 1	AO2 4.7.3.4 4.7.3.6

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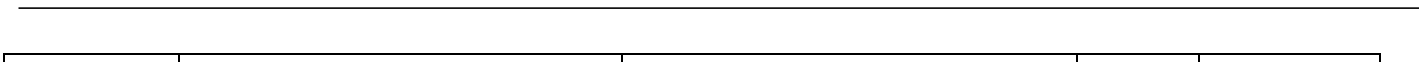
Answer 11 · Mark scheme June 2019 | 8461/2F | Original Q5

Question	Answers	Mark	AO / Spec. Ref.
05.7	**Level 2:** Relevant points (reasons/causes) are identified, given in detail and logically linked to form a clear account.	3–4	AO3
	Level 1: Points are identified and stated simply, but their relevance is not clear and there is no attempt at logical linking.	1–2	
	No relevant content	0	
	Indicative content • displaced animals can move to adjacent areas • where suitable habitat is found **or** where the trees have not been cut down • seeds return to deforested area • from other (forested) areas • plants / trees begin to grow back • so provide food / shelter / nest sites / suitable habitat for animals • animals return to re-growing area • from other (forested) areas • sufficient time for regeneration • old growth area is a source of recolonising organisms		4.7.3.1 4.7.3.4 4.7.3.6
Total		**13**	

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Answer 11 · Mark scheme

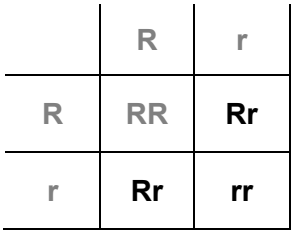
June 2019 | 8461/2F | Original Q5



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Answer 12 · Mark scheme

November 2021 | 8461/2F | Original Q5

Question	Answers	Extra information	Mark	AO / Spec. Ref.
05.1	*Phytophthora*		1	AO2 4.6.4 4.7.5.1
05.2	the fungus can get oxygen from the air		1	AO2 4.4.2.1 4.7.5.1
05.3	the variety of species of organisms in the river		1	AO1 4.7.3.1
05.4	pesticide washed into river pesticide kills (some) organisms / plants / animals in river	allow spray drift allow reference to run-off allow carried by rainfall	1 1	AO2 4.7.3.1 4.7.3.2 4.7.3.6 4.7.5.1
05.5		all 3 correct = **2** marks 2 correct = **1** mark 0 or 1 correct = **0** marks	2	AO2 4.6.1.6 4.7.5.1
05.6	ring drawn around **RR** / **rr** in **Figure 9**	allow around both **RR** and **rr**	1	AO2 4.6.1.6 4.7.5.1
05.7	75%	percentage must match student's answer in **Figure 9** allow 75% if no answer to question **05.5**	1	AO3 4.6.1.6 4.7.5.1

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Answer 12 · Mark scheme

Question	Answers	Extra information	Mark	AO / Spec. Ref.
05.8	no fusion of gametes **or** (asexual reproduction involves) mitosis	allow no fertilisation	1	AO2 4.6.1.1 4.6.1.3 4.7.5.1
	(so) offspring are genetically identical (to parent plant)	allow offspring are a clone allow offspring have same DNA allow no mixing of genes / DNA allow no mixing of genetic material allow all offspring inherit **R**	1	
Total			**11**	

4.7.3.6 Maintaining biodiversity

Answer 12 · Mark scheme

November 2021 | 8461/2F | Original Q5

