AQA GCSE Biology | 8461

SPECIFICATION POINT 4.7.3.4

Deforestation

Mark schemes and examiner comments

Tier	**Foundation**
Question groups	**17**
Available paper years	**2007–2019**

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.

4.7.3.4 Deforestation

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

4.7.3.4 Deforestation

Answer 02 · Mark scheme June 2007 | BLY1B | Original Q2 | Legacy

Two	**A**	biodiversity	**2**
	B	carbon dioxide	**1**
	C	energy	**4**
	D	methane	**3**

Answer 03 · Mark scheme November 2007 | BLY1B | Original Q4 | Legacy

Four	**A**	glass	**2**
	B	paper	**1**
	C	plastic	**4**
	D	steel	**3**

Answer 04 · Mark scheme March 2008 | BLY1BP | Original Q7 | Legacy

Seven	**3**	**4**	**1**	**4**

4.7.3.4 Deforestation

Answer 05 · Mark scheme

January 2009 | BLY1F | Original Q2 | Legacy

question	answers	extra information	mark
2(a)	fuel / houses / paper	allow any object made from wood	1
	farming / agriculture / replanting	allow roads / homes / factories	1
	carbon dioxide / greenhouse gas / pollution **or** relative named pollutant		1
	warming / temperature increase		1
2(b)(i)	none of species left / died out		1
2(b)(ii)	may have products useful to humans / examples	allow preserve for future generations **or** 'still there to look at' allow affect food chains / cycles **or** extinction of other species allow non human reasons eg loss of habitat ignore environmental effects	1
Total			**6**

4.7.3.4 Deforestation

Answer 05 · Mark scheme January 2009 | BLY1F | Original Q2 | Legacy

Biology BLY1F - AQA GCSE Mark Scheme 2009 January Series

COMPONENT NUMBER: BLY1F

COMPONENT NAME: Science B / Biology

STATUS: Final

DATE: January 2009

Answer 06 · 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 07 · Mark scheme March 2010 | BLY1BP | Original Q2 | Legacy

Two	**A**	biodiversity	**2**
	B	pollution	**4**
	C	global warming	**3**
	D	deforestation	**1**

Answer 08 · Mark scheme June 2010 | BLY1BP | Original Q4 | Legacy

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

4.7.3.4 Deforestation

Answer 09 · Mark scheme

June 2010 | BLY1F | Original Q5 | Legacy

Question 5

question	answers	extra information	mark
5(a)(i)	40	accept –40 or +40	1
5(a)(ii)	**Step 1** 92 **Step 2** 18 **Step 3** 74	 correct subtraction of answer in **step 2** from answer in **step 1** gains **1** mark correct answer 74 with no working gains **3** marks ignore sign	1 1 1
5(b)(i)	both animals and plants		1
5(b)(ii)	microorganisms		1
5(b)(iii)	carbon dioxide		1
Total			**7**

4.7.3.4 Deforestation

Answer 09 · Mark scheme June 2010 | BLY1F | Original Q5 | Legacy

BLY 1F

Answer 10 · Mark scheme March 2011 | BLY1BP | Original Q3 | Legacy

Three	**A**	160	**4**
	B	1200	**3**
	C	1400	**2**
	D	2600	**1**

Answer 11 · Mark scheme March 2011 | BLY1BP | Original Q8 | Legacy

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

Answer 12 · 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**

4.7.3.4 Deforestation

Answer 13 · Mark scheme June 2014 | BL3FP | Original Q7 | Legacy

7			6	AO1 3.3.1

Marks awarded for this answer will be determined by the Quality of Written Communication (QWC) as well as the standard of the scientific response. Examiners should also refer to the information on page 5 and apply a 'best-fit' approach to the marking.

0 marks	Level 1 (1–2 marks)	Level 2 (3–4 marks)	Level 3 (5–6 marks)
No relevant content	There is at least one reason for deforestation **or** an attempt at a description of at least one way deforestation is affecting the atmosphere.	There is at least one reason for deforestation **and** a description of the way deforestation is affecting one gas in the atmosphere **or** the process that causes an effect.	There are reasons for deforestation **and** a clear description of the way deforestation is affecting one gas in the atmosphere **and** the process that causes this.

examples of the points made in the response	**extra information**
Reasons for deforestation • timber for construction / furniture / boat building / paper production • growing plants for biofuels for motor fuel / aviation / lawnmowers • use of wood as a fuel • land for building or agriculture to provide food, such as rice fields and cattle ranching	

Effects of deforestation
• increase in carbon dioxide in atmosphere
  ○ due to burning
  ○ due to activities of microbes
  ○ less carbon dioxide taken in / locked up (by trees)
  ○ less photosynthesis
• increase in methane in atmosphere
  ○ due to rice production / cattle
	ignore references to oxygen
	
	accept explanations of the effect of water (vapour)

4.7.3.4 Deforestation

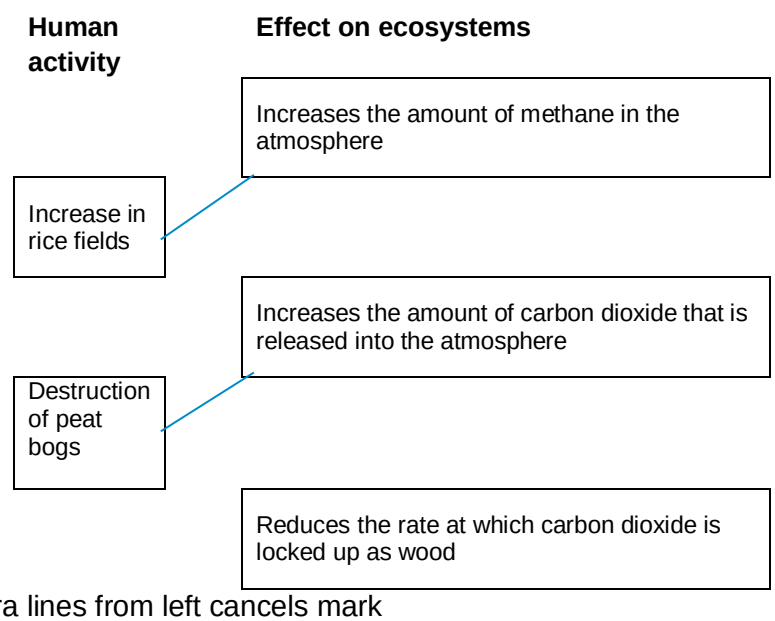
Answer 14 · Mark scheme June 2015 | BL3FP | Original Q9 | Legacy

Question	Answers	Extra information	Mark	AO / Spec. Ref.
9(a)	any **two** from: • (volume of) peat compost has been steady and then declined **or** volume of peat compost has declined since 2005 • (volume of) peat-free compost has increased (since 1999) • (volume of) peat is higher than peat-free until 2005, then peat-free compost is higher (than peat) • total volume of peat and peat-free compost has increased	allow 2007 instead of 2005 allow 2007	2	AO2 342d
9(b)	increases carbon dioxide (in the atmosphere)	ignore methane	1	AO1 342
9(c)	any **one** from: • reduces biodiversity • destruction of habitats • disruption of food chains		1	AO1 342b
Total			**4**	

4.7.3.4 Deforestation

Answer 15 · Mark scheme

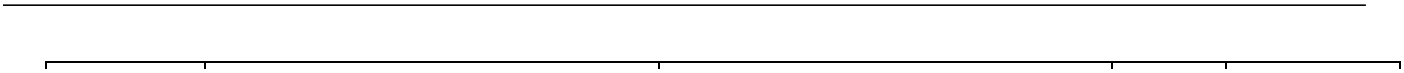
June 2016 | BL3FP | Original Q6 | Legacy

Question	Answers	Extra information	Mark	AO / Spec. Ref.
6(a)	 extra lines from left cancels mark		2	AO1 3.4.2c/d
6(b)(i)	any **two** from: • (to provide land) for farming / agriculture • (to provide land) for quarrying • (to provide land) for building • to provide wood for building materials • to provide fuel • to provide paper		2	AO1 3.4.2c
6(b)(ii)	any **two** from: • changes in earth's climate, ie droughts, flooding, hurricanes • rise in sea levels • reduce biodiversity • change in migration patterns • may change distribution of species	ignore acid rain **and** the ozone layer **and** forest fires ignore temperature rise allow ice caps melt	2	AO1 3.4.2a
Total			**6**	

4.7.3.4 Deforestation

Answer 15 · Mark scheme

June 2016 | BL3FP | Original Q6 | Legacy



4.7.3.4 Deforestation

Answer 16 · Mark scheme

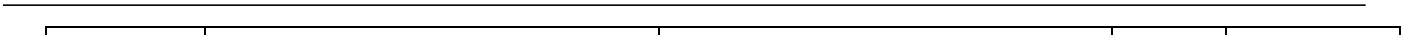
June 2017 | BL3FP | Original Q1 | Legacy

Question	Answers	Extra information	Mark	AO / Spec. Ref.
1(a)(i)	8.0		1	AO2 3.4.2
1(a)(ii)	To provide land to grow crops. To provide space for building.		1 1	AO1 3.4.1c 3.4.2a/c
1(b)	Carbon dioxide Methane		1 1	AO1 3.4.3a
Total			**5**	

4.7.3.4 Deforestation

Answer 16 · Mark scheme

June 2017 | BL3FP | Original Q1 | Legacy



4.7.3.4 Deforestation

Answer 17 · 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

4.7.3.4 Deforestation

Answer 17 · 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**	

4.7.3.4 Deforestation

Answer 17 · Mark scheme

June 2019 | 8461/2F | Original Q5

