AQA GCSE Biology | 8461

SPECIFICATION POINT 4.6.2.1

Variation

Mark schemes and examiner comments

Tier	**Foundation**
Question groups	**12**
Available paper years	**2008–2019**

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.

4.6.2.1 Variation

Answer 01 · Mark scheme June 2008 | BLY1BP | Original Q5 | Legacy

Five	**A**	extinction	**4**
	B	natural selection	**1**
	C	mutation	**3**
	D	variation	**2**

Answer 02 · Mark scheme November 2008 | BLY1BP | Original Q5 | Legacy

Five	**A**	observed that all species change over time	**3**
	B	had sufficient evidence to prove evolution	**4**
	C	thought that evolution was by natural selection	**1**
	D	changes that happen during an organism's lifetime are inherited by offspring	**2**

	A	**B**	**C**	**D**

Answer 03 · Mark scheme June 2009 | BLY1BP | Original Q3 | Legacy

Three	**A**	evolution	**4**
	B	mutation	**2**
	C	selection	**3**
	D	variation	**1**

Answer 04 · Mark scheme November 2009 | BLY1BP | Original Q3 | Legacy

Three	**A**	clones	**3**
	B	cuttings	**4**
	C	gametes	**1**
	D	variations	**2**

Answer 05 · Mark scheme November 2010 | BLY1BP | Original Q3 | Legacy

Three	**A**	extinction	**4**
	B	mutation	**1**
	C	natural selection	**3**
	D	variation	**2**

Answer 06 · Mark scheme June 2011 | BLY1AP | Original Q7 | Legacy

Seven	**4**	**3**	**2**	**4**

4.6.2.1 Variation

Answer 07 · Mark scheme

June 2011 | BLY1BP | Original Q5 | Legacy

Five	**A**	extinction			4
	B	mutation			2
	C	reproduction			3
	D	variation			1
	A		**B**	**C**	**D**

4.6.2.1 Variation

Answer 08 · Mark scheme

June 2011 | BLY1F | Original Q7 | Legacy

Question 7

question	answers	extra information	mark
7(a)	warmer / dryer	allow greenhouse effect / global warming ignore wind	1
7(b)(i)	genes / alleles / chromosomes / DNA / genetic material / genetics	allow inheritance allow nutrition / food / metabolism / growth rate ignore environment	1
7(b)(ii)	natural selection / evolution	allow survival of the fittest	1
Total			3

4.6.2.1 Variation

Answer 08 · Mark scheme

June 2011 | BLY1F | Original Q7 | Legacy

BLY1F

4.6.2.1 Variation

Answer 09 · Mark scheme

January 2012 | BL1FP | Original Q3 | Legacy

Question 3

question	answers	extra information	mark
3(a)	lemur(s)		1
3(b)	gorilla(s)	in either order	1
	chimpanzee(s)	accept chimps	1
3(c)(i)	(Charles) Darwin	accept (Alfred) Wallace if first name given it must be correct	1
3(c)(ii)	variation	in this order	1
	environment	allow phonetic spellings	1
	survive		1
	generation		1
Total			8

4.6.2.1 Variation

Answer 09 · Mark scheme

January 2012 | BL1FP | Original Q3 | Legacy

BL1FP

4.6.2.1 Variation

Answer 10 · Mark scheme

June 2016 | BL1FP | Original Q6 | Legacy

Question	Answers	Extra information	Mark	AO / Spec. Ref.
6(a)	three billion		1	AO1 1.8.1a
6(b)	mutation(s) breed / reproduce	in this order only allow pass on their genes	1 1	AO1 1.8.1e/f
Total			3	

4.6.2.1 Variation

Answer 10 · Mark scheme

June 2016 | BL1FP | Original Q6 | Legacy

4.6.2.1 Variation

Answer 11 · Mark scheme

June 2018 | 8461/2F | Original Q3

Question	Answers	Extra information	Mark	AO / Spec. Ref.
03.1	(organism) soft-bodied **or** (fossil) destroyed	allow lack hard parts / skeleton / shell allow (organism) eaten / decayed allow buried (very) deep allow they are (very) small	1	AO1 4.6.3.5
03.2	any **two** from: • the fish (dies) buried in sediment / sand / mud • (only) the soft parts decayed / eaten **or** the hard parts / bones did not decay or were not eaten • mineralisation occurred	allow other examples of sediments do **not** accept rock(s) allow description of mineralisation eg bones turned to stone allow imprinted (in the sediment)	2	AO2 4.6.3.5
03.3	any **two** from: • drought • ice age / global warming • volcanic activity • asteroid / meteor collision • (new) predators • (new) disease / named pathogen • competition for food • competition for mates • lack of habitat or habitat change	ignore pollution allow earthquakes / tsunami allow hunters / poachers allow eaten allow lack of food allow isolation or lack of mates if no other marks awarded allow natural disaster / climate change / weather change / catastrophic event / environmental change for **1** mark	2	AO1 4.6.3.6

4.6.2.1 Variation

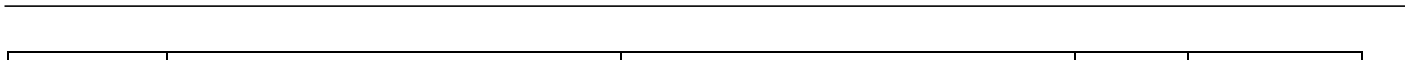
Answer 11 · Mark scheme

Question	Answers	Extra information	Mark	AO / Spec. Ref.
03.4	a change in a gene		1	AO1 4.6.2.1
03.5		allow in terms of an example		AO1 4.6
	there is variation (between members of a species)	allow mutation	1	4.6.2.2 4.6.3.1
	better adapted survive	allow 'survival of the fittest'	1	
	(reproduce and) pass on (favourable) allele(s) / gene(s) / mutation(s) / DNA / genetic material	ignore pass on characteristic(s)	1	
Total			9	

4.6.2.1 Variation

Answer 11 · Mark scheme

June 2018 | 8461/2F | Original Q3



4.6.2.1 Variation

Answer 12 · Mark scheme June 2019 | 8461/1F | Original Q2

02.1	the movement of particles from a high concentration to a low concentration		1	4.1.3.1 AO1
02.2	(gills) have (many) projections (for) large(r) surface / area **or** (gills) are on the outside of the body (1) for good access to water (1)	allow description of projections allow have lots of / five gills	1 1	4.1.3.1 AO2
02.3	differentiation		1	4.1.2.3 AO1
02.4	mitosis	do **not** accept meiosis	1	4.1.2.2 AO1
02.5	hair		1	4.1.2.2 4.1.2.3 AO1
02.6	axolotls are cheap to feed axolotls are easy to breed		1 1	4.1.2.3 AO3
02.7	D		1	4.2.2.2 AO1
02.8	trachea	allow windpipe allow cartilage (ring)	1	4.2.2.2 AO1
02.9	pulmonary artery		1	4.2.2.2 AO1
Total			**11**	

4.6.2.1 Variation

Answer 12 · Mark scheme

June 2019 | 8461/1F | Original Q2

