AQA GCSE Biology | 8461

SPECIFICATION POINT 4.5.1

Homeostasis

Mark schemes and examiner comments

Tier	**Foundation**
Question groups	**6**
Available paper years	**2010–2017**

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.

4.5.1 Homeostasis

Answer 01 · Mark scheme

June 2010 | BLY1AP | Original Q3 | Legacy

Three	**A**	muscles	4
	B	stimuli	1
	C	receptors	2
	D	neurones	3

Answer 02 · Mark scheme

June 2011 | BLY1AP | Original Q8 | Legacy

Eight	**4**	**1**	**3**	**2**

4.5.1 Homeostasis

Answer 03 · Mark scheme

June 2012 | BL1FP | Original Q1 | Legacy

Question 1

question	answers	extra information	mark
1 (a)	a stimulus		1
1 (b)(i)	**A**		1
1 (b)(ii)	**C** **D**	either order	1 1
1 (b)(iii)	**E**		1
1 (c)	brain	allow spinal cord / CNS / central nervous system do **not** allow spine	1
Total			**6**

4.5.1 Homeostasis

Answer 03 · Mark scheme

June 2012 | BL1FP | Original Q1 | Legacy

BL1FP

4.5.1 Homeostasis

Answer 04 · Mark scheme

Question 2

question	answers	extra information	mark
2(a)(i)	skin		1
2(a)(ii)	kidneys	accept kidney	1
2(a)(iii)	lungs	accept lung	1
2(b)(i)	multiply temperature by number of students at that temperature and add them up divide by number of students	allow (36.8×5) + (36.9×3) + (37.0×6) + (37.1×7) + (37.2×3) allow 888 allow divide by 24	1 1
2(b)(ii)	10 / ten		1
2(b)(iii)	so enzymes work (well)	ignore death / overheating / hypothermia allow body reactions work (well)	1
Total			7

4.5.1 Homeostasis

Answer 04 · Mark scheme

January 2013 | BL1FP | Original Q2 | Legacy

BL1FP

4.5.1 Homeostasis

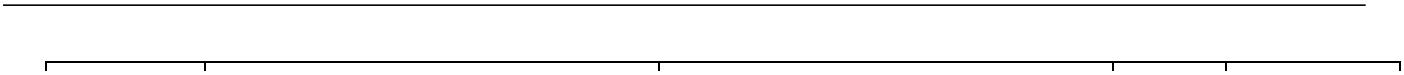
Answer 05 · Mark scheme

Question	Answers	Extra information	Mark	AO / Spec. Ref.
1(a)(i)	stimulus		1	AO1 1.2.1b
1(a)(ii)	cytoplasm		1	AO1 1.2.1c
1(b)(i)		in this order only		AO2
	ear(s)		1	1.2.1b
	eye(s)	accept retina	1	
	skin	ignore extra detail	1	
1(b)(ii)	A muscle		1	AO2 1.2.1e
Total			**6**	

4.5.1 Homeostasis

Answer 05 · Mark scheme

June 2015 | BL1FP | Original Q1 | Legacy



4.5.1 Homeostasis

Answer 06 · Mark scheme

June 2017 | BL1FP | Original Q9 | Legacy

<table>
<tr><th>Question</th><th>Answers</th><th>Extra information</th><th>Mark</th><th>AO / Spec. Ref.</th></tr>
<tr><td>9(a)(i)</td><td><table><tr><th>Liquid</th><th>Organ</th></tr><tr><td>urine</td><td>kidney</td></tr><tr><td>sweat</td><td>skin</td></tr></table></td><td>award 1 mark for each liquid
award 1 mark for each organ correctly linked to the liquid
allow bladder instead of kidney
ignore water as a liquid</td><td>4</td><td>AO1
1.2.2a</td></tr>
<tr><td>9(a)(ii)</td><td>in food / diet / eating</td><td>allow in drinks / water</td><td>1</td><td>AO1
1.1.1a</td></tr>
</table>

4.5.1 Homeostasis

Answer 06 · Mark scheme

Question	Answers	Extra information	Mark	AO / Spec. Ref.
9(b)			6	AO1 1.2.1a/b/c/d/e

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	identifies one type of receptor **or** the stimulus it detects **or** refers to at least one type of neurone **or** refers to passage of information **or** at least one response by an effector	identifies at least one link between: one type of receptor **and** the stimulus it detects **and / or** refers to at least one type of neurone **and / or** refers to passage of information **and / or** at least one response by an effector	identifies one type of receptor **and** the stimulus it detects **and** refers to different types of neurone **and** refers to passage of information **or** at least one response by an effector

examples of biology points made in the response:	extra information:
• *(R & S)* (receptors in) skin detects pressure / pain / change in temperature	*(R & S)* = receptor and stimulus
• *(R & S)* (receptors in) eyes detect light	*(P)* = passage of information
• *(R & S)* (receptors in) ears detect sound	*(N)* = type of neurone
• *(R& S)* (receptors in) ears detect changes in position	*(E)* = response by effector
• *(R& S)* (receptors on) tongue detects chemicals / taste	
• *(R & S)* (receptors in) nose detects chemicals / smell	
• *(N)* sensory / relay / motor neurone	
• *(P)* neurones carry impulses / electrical information	allow electrical signals ignore messages
• *(P)* ref to synapse	
• *(P)* (release of) chemical information at / across synapse	allow neurotransmitter or named neurotransmitter
• *(E)* muscle contracts	
• *(E)* gland releases hormone / chemical / enzyme	

Total		11