

# 12. Respiration

## 12.2 Aerobic respiration

### Paper 3 and 4

#### Marking Scheme

## Q1.

(c)(i)	glucose ; oxygen ;	2	R each additional circle
(c)(ii)	mitochondria / mitochondrion ;	1	
(c)(iii)	(cell) membrane ;	1	

## Q2.

(b)	glucose + oxygen ; → carbon dioxide + water ;	2	
-----	--	---	--

## Q3.

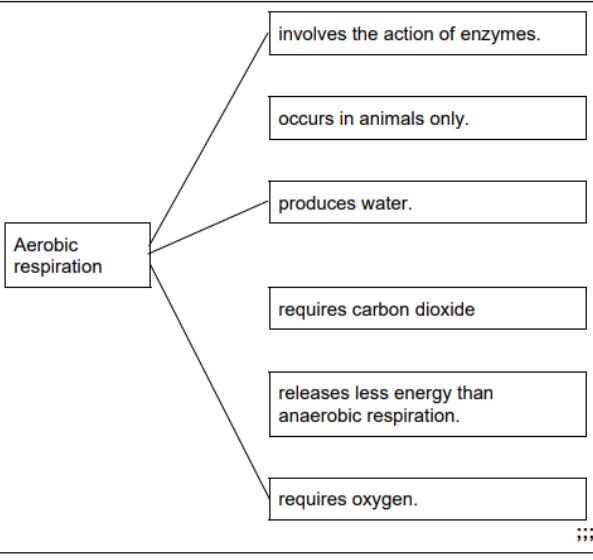
(a)(i)		3	one mark for each correct line R each additional line
(a)(ii)	more ;	1	

(a)(iii)	anaerobic / fermentation ; produces, alcohol / ethanol ; produces carbon dioxide ;  <i>used in:</i> bread-making ; brewing / named product of brewing ; (bio)fuels ; disinfectants / AW ; AVP ;	3	
----------	--	---	--

## Q4.

(c)	oxygen ;	1	
-----	----------	---	--

Q5.

(a)		<b>3</b> one mark for each correct line <b>R</b> each additional line
-----	---	--

Q6.

(d)	cells ; oxygen ; nutrient ;	<b>3</b>
-----	-----------------------------------	----------

Q7.

(a)	(reactants) glucose + oxygen ; (products) carbon dioxide + water ;	<b>2</b>
-----	---	----------

Q8.

(a)(i)	Fungus / Fungi ;	<b>1</b>	
(a)(ii)	<u>aerobic respiration</u> ;	<b>1</b>	

Q9.

(a)	$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$ (+ energy released) ;;	<b>2</b>	one mark for correct symbols one mark for correct balancing
-----	--	----------	--

**Q10.**

(b)	$C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O$ (+ energy released) ;;	2	one mark for correct symbols one mark for correct balancing
(c)(i)	volume ; distance / length ; control / maintain / regulate / stabilise / keep / constant / sustain ;	3	
(c)(ii)	carbon dioxide will affect, results / volume of gas (in respirometer) / carbon dioxide could kill the larvae ;	1	A to measure (changes in) oxygen only