

Mark Scheme (Results)

Summer 2010

IGCSE

IGCSE Biology (4325) Paper 03

IGCSE Science (Double Award) (4437) Paper 07

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IGCSE BIOLOGY 4325/03 - SUMMER 2010

Question Number	Answer	Mark
1(a)	B; E;	(2)

Question Number	Answer	Mark
1(b)	safe;	(1)

Question Number	Answer	Mark
1(c)	be faster;	(1)

Question Number	Answer	Mark
2(a)(i)	iodine;	(1)

Question Number	Answer	Mark
2(a)(ii)	Benedict's;	(1)

Question Number	Answer	Mark
2(b)(i)	blue-black;	(1)

Question Number	Answer	Mark
2(b)(ii)	blue;	(1)

Question Number	Answer	Mark
3(a)(i)	3.2;	(1)

Question Number	Answer	Mark
3(a)(ii)	6.4 / the answer from (i) doubled;	(1)

Question Number	Answer	Mark
3(b)	faster / increase / higher / eq; (more) transpiration / evaporation / diffusion / kinetic energy / eq; Ignore water loss	(2)

Question Number	Answer	Mark
3(c)	wind; humidity; light; species of plant / surface area (of leaves) / number of leaves / size of leaves / number of stomata; Ignore carbon dioxide / water (in soil)	(2)

Question Number	Answer	Mark						
4(a)(i)	<table border="1"> <tr> <td>### ###</td> <td>17;</td> </tr> <tr> <td>### //</td> <td></td> </tr> <tr> <td>### /;</td> <td>6;</td> </tr> </table> <p>correct tally; correct transfer from tally;;</p>	### ###	17;	### //		### /;	6;	(3)
### ###	17;							
### //								
### /;	6;							

Question Number	Answer	Mark
4(a)(ii)	<p>idea of chance; idea of number;</p> <p>eg. random (fertilisation) / chance / probability / not enough offspring / sample too small</p> <p>eg. 23 cannot be divided into 3:1 / 23 is an odd number / odd number of offspring / 23 not 24 offspring / 17 is a prime number / 17 cannot be divided by 3</p> <p>Ignore disease / death / eaten Ignore genetic/environmental variation</p>	<p>max</p> <p>(1)</p>

Question Number	Answer	Mark
4(b)	bending towards the light;	(1)

Question Number	Answer	Mark
5(a)	S scale linear + half grid; L line straight + through points; A x axis = time and y axis = breathing rate; U axes labelled time + min and breathing rate + per min; P points;	(5)

Question Number	Answer	Mark
5(b)(i)	increases; slows down / levels off / eq; Ignore goes down / decreases	(2)

Question Number	Answer	Mark
5(b)(ii)	oxygen; respiration (aerobic or anaerobic); energy / ATP; muscles; lactic acid / oxygen debt / carbon dioxide;	max (3)

Question Number	Answer	Mark
5(c)	repeat the investigation / use more people / eq;	(1)

Question Number	Answer	Mark
6	C - different distances / near or far from sea; O - same species; R - repeat sampling; M 1 - quadrat; M2 - count / number / amount / how many / eq; S 1 - same time / season / weather / eq; S2 - same rock (type) / aspect / beach; Ignore pollution / predation	(6)

Question Number	Answer	Mark
7(a)	oxygen / O ₂ ;	(1)

Question Number	Answer	Mark
7(b)	change lamp distance / bulb wattage / number of lamps / eq;	(1)

Question Number	Answer	Mark
7(c)	temperature; carbon dioxide; pH; <u>volume</u> / <u>amount</u> of water; Ignore source / type <u>background</u> light / colour of light / eq; mass / size / amount / surface area of pondweed / eq; species / type of pondweed;	max (3)

Question Number	Answer	Mark
7(d)(i)	30;	(1)

Question Number	Answer	Mark
7(d)(ii)	bubbles <u>per min</u> ; high + medium + low; first + second + third; average;	(4)

Question Number	Answer	Mark
7(d)(iii)	37 / first time for high / eq;	(1)

Question Number	Answer	Mark
7(e)	(increase in light causes) increase in bubbles/oxygen / eq; photosynthesis;	(2)

Question Number	Answer	Mark
7(f)	volume / syringe / measuring cylinder / eq;	(1)

PAPER TOTAL: 50 MARKS

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