

IGCSE Biology 4325/03 4437/07

Mark Scheme (Results)

November 2008

IGCSE

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The following acronyms are used

owtte	or words to that effect
ecf	error carried forward
dop	dependent on previous
nwn	no working necessary

Question Number	Correct Answer	Notes	Mark
1 (a) (i)	measuring <u>cylinder</u> ;		(1)

Question Number	Correct Answer	Notes	Mark
1 (a) (ii)	volume; Ignore liquid / amount of liquid		(1)

Question Number	Correct Answer	Notes	Mark
1 (b) (i)	25 (cm ³);		(1)

Question Number	Correct Answer	Notes	Mark
1 (b) (ii)	5 (cm ³);		(1)

Question Number	Correct Answer	Notes	Mark
1 (c)	34;		(1)

(Total 5 marks)

Question Number	Correct Answer	Notes	Mark
2 (a) (i)	Bunsen; test tube;		(2)

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

Question Number	Correct Answer	Notes	Mark
2 (a) (iii)	blue; red / orange / yellow;		(2)

Question Number	Correct Answer	Notes	Mark
2 (b) (i)	iodine;		(1)

Question Number	Correct Answer	Notes	Mark
2 (b) (ii)	blue / black / blue black / purple;		(1)

Question Number	Correct Answer	Notes	Mark
2 (b) (iii)	yellow / brown / yellow brown / light brown / eq; Ignore no colour change		(1)

(Total 8 marks)

Question Number	Correct Answer	Notes	Mark
3 (a) (i)	(6 4) 6 0 4 2 5 1 4 3 4 2; 29 12;		(2)

Question Number	Correct Answer	Notes	Mark
3 (a) (ii)	quadrat B, buttercup in field X;		(1)

Question Number	Correct Answer	Notes	Mark
3 (b) (i)	same number of plantain in field X and in field Y;		(1)

Question Number	Correct Answer	Notes	Mark
3 (b) (ii)	more buttercup in field X compared to field Y;		(1)

Question Number	Correct Answer	Notes	Mark
3 (c) (i)	1.5 <u>m</u> ² ;		(1)

Question Number	Correct Answer	Notes	Mark
3 (c) (ii)	6600;; Allow one for 66 x 150 or 66 / 1.5 in working		(2)

Question Number	Correct Answer	Notes	Mark
3 (d)	take more readings / more quadrats / sample larger area / random placing;		(1)

(Total 9 marks)

Question Number	Correct Answer	Notes	Mark
4 (a) (i)	S - scale linear and half grid; L - line through points; A - axes correct way + labelled; P - points plotted correctly;;		(5)

Question Number	Correct Answer	Notes	Mark
4 (a) (ii)	increases; then level / constant / stays same / eq;		(2)

Question Number	Correct Answer	Notes	Mark
4 (b)	ref to carbon dioxide; oxygen (needed); respiration / energy; oxygen debt / remove lactic acid;		Max (2)

Question Number	Correct Answer	Notes	Mark
4 (c)	someone else to count / use a machine/monitor; other person less likely to miscount / automatic recording;		(2)

(Total 11 marks)

Question Number	Correct Answer	Notes	Mark
5 (a) (i)	increase; enzymes/substrate/molecules have more (kinetic) energy/movement / more collisions;		(2)

Question Number	Correct Answer	Notes	Mark
5 (a) (ii)	decrease; enzymes denatured / destroyed / eq;		(2)

Question Number	Correct Answer	Notes	Mark
5 (a) (iii)	measurements at smaller intervals; around 45 °C / above and below 45 °C / sensible range; repeat;		Max (3)

Question Number	Correct Answer	Notes	Mark
5 (b) (i)	same volume/concentration of solution / mass of yeast / mass of glucose / pH; use measuring cylinder / weighing scales / buffer;		(2)

Question Number	Correct Answer	Notes	Mark
5 (b) (ii)	bubbles differ in size / difficult to count; volume / collect in measuring cylinder / gas syringe / eq;		(2)

(Total 11 marks)

Question Number	Correct Answer	Notes	Mark
6	C - different temperatures; O - same species / mass / number of leaves / eq; R - repeat; M 1 - bubble movement / water uptake / weight loss / cobalt chloride / potometer; M2 - ref to time; S1 - same humidity / carbon dioxide / LI / wind; S2 - same humidity / carbon dioxide / LI / wind;		(6)

(Total 6 marks)