

IGCSE Biology 4325 03 4437 07
Mark Scheme (Results)
Summer 2008

IGCSE

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IGCSE BIOLOGY 4325-03 / 4437-07 MARK SCHEME

Key

- ; indicates separate mark points
/ indicates alternatives
eq allow for correct equivalent
— word underlined means no alternatives allowed

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
1	Benedict's; and bunsen; (or opposite) iodine; and spotting tile; (or opposite)			(4)

(Total 4 marks)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
2 (a)	increases; 30 °C / fastest at 30 °C / optimum; decreases / slows down / stops;			Max 2 (2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
2 (b)	ref. movement of molecules / (kinetic) energy; more/faster collisions; optimum; denature / destroy enzyme/active site;			Max 3 (3)

(Total 5 marks)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
3 (a)(i)	(3) 14; 11;			(2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
3 (a)(ii)	scale linear + minimum of half axis; plot;; axis - number + plants 1, 2 and 3; key - smooth and wrinkled;			(5)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
3 (b)	smooth dominant / wrinkled recessive; parent plants are heterozygous / Ss and Ss / carriers; genotype of offspring SS Ss Ss and ss; phenotypes correct / 3:1 / 1 in 4 / 25% / eq;			Max 3 (3)

(Total 10 marks)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (a)(i)	use ruler / graph paper / eq; qualified - use as template / cut all together / line up together / use straight edge / set square / method to ensure cut is perpendicular / eq;			(2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (a)(ii)	temperature / volume of solution / light / eq; incubator / measuring cylinder / keep in dark / eq; same potato = max 1			(2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (b)(i)	9.6 9.7 9.7; (any order) (3 correct = 2 marks, 2 or 1 correct = 1 mark)			(2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (b)(ii)	-0.4 -0.3 -0.3; (from student answer) allow transfer error			(1)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (b)(iii)	water out (of potato); osmosis; dilute solution to stronger solution / eq;			(3)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (c)	increase in length; water enters (potato);			(2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (d)(i)	repeat / use more cylinders / use more potatoes;			(1)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
4 (d)(ii)	weigh potato / measure in mm/decimal places / use vernier callipers / eq;			(1)

(Total 14 marks)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
5 (a)	(top/chemical/mass/digital) balance / scales / any weighing machine / eq;			(1)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
5 (b)	reliability / average / less chance of anomalous/rogue result affecting average / eq;			(1)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
5 (c)	light; use bulb / same time of day / eq; wind / air speed; shelter from drafts / use fan / eq; humidity / eq; dry room / enclose in plastic bag / silica gel / eq; leaves of same species / type / age; same plant / eq; Ignore temperature / size of leaf			Max 4 (4)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
5 (d)	<u>mass</u> loss reduces / eq; (less) evaporation / diffusion / transpiration / molecular movement / eq; Reject photosynthesis			(2)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
5 (e)	cover idea; vaseline / petroleum jelly / use of cobalt chloride / eq; US / LS;			(3)

(Total 11 marks)

Question Number	Correct Answer	Acceptable Answers	Reject	Mark
6	<p>C two / several temperatures / eq;</p> <p>O same person / mass / gender / body fat / age / fitness / eq;</p> <p>R repeat / eq;</p> <p>M 1 how collected / eq; 2 ref to time;</p> <p>S 1 + 2level of exercise / clothing / humidity / time of day / eq;;</p>			(6)

(Total 6 marks)

PAPER TOTAL 50 MARKS