UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

0610 BIOLOGY

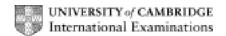
0610/52

Paper 5 (Practical Test), maximum raw mark 40

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – October/November 2010	0610	52

Question		Mark scheme					Additional guidance A. = accept, R. = reject, I. = ignore.
1	(a) (i)	appearance	w1 - 3 weeks wrinkled skin / smaller than the other two apples / more coloured / AW	W2 - 1 week few wrinkles / larger / less coloured / AW	w3 - fresh no wrinkles / largest of the apples / more green / AW		Check Supervisor's report for details of apples provided. [1] appearance in each box; [2] texture in each box; [3] difference in each row;
		texture	softest / AW	slightly soft / AW	firm / AW	[3]	
	(ii)	W1 wrinkled skin / smaller / more coloured / softest in texture;			oftest in	[1]	Check Supervisor's report.
	(b) (i)	starch test / dip into iodine solution; expected colour change; reducing sugar make solution / extract of sample; add Benedict's solution; heat; expected colour change; ONE safety feature;			·	[max 4]	Max 3 for reducing sugars. A. water-bath / lab. coat / tongs / etc. I. gloves
	(ii)	test starch reducing sugar	W1 - 3 weeks / older brown; orange / red;	W2 - 1 week some black areas; orange;	w3 - fresh more black areas; yellow;	[5]	Check Supervisor's report. Observations in (b)(ii) All boxes completed = 5 Wrong colour or blank box -1.
	(iii)	deduction for starch; deduction for reducing sugar; comparison with storage time as fruit ripens / no difference;			no difference;	[3]	Deductions in (b)(iii) based on candidate's observations.

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
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Question	Mark scheme				Additional guidance A. = accept, R. = reject, I. = ignore.
(c) (i)	time / days	mass of apples – not wrapped / g	0 10.1 35.5 66.3 93.5 109.5	[1]	All correct = 1. Error carried forward for plot.
(ii)	 A – axes orientation and labels + units; S – scale – suitable to fill more than half the grid and even; P – plot; L – line; 		[4]	y-axis – loss in mass / g and x-axis – time / days To fill more than ½ the grid. Allow +/− 0.5 mm square No extrapolation. A . Ruled lines A . lines of best fit. Or smooth curve. Histogram / bar chart A , P and neat ruled columns which do not touch – Max 3	
(iii)	respiration / oxidation / fermentation / evaporation / transpiration / water loss / decay / decomposition;			[1]	I. hydrolysis / osmosis / eating.
(iv)	 keep in cooler conditions; cover apples; keep dry / well ventilated; under different gases / nitrogen / carbon dioxide / less oxygen / air tight / vacuum; keep separated / in smooth containers; not in sunlight / shade; 			[max 3]	A. keep in a refrigerator.
				[Total: 25]	

Page 4	Mark Scheme: Teachers' version	Syllabus	Paper
	IGCSE – October/November 2010	0610	52

Que	estion	Mark scheme		Additional guidance A. = accept, R. = reject, I. = ignore.	
2	(a)	Drawing: O clear outline, no heavy shading P larger size; D two valves; Label: hinge / shell / exoskeleton / ligament;	[4]	Oyster, freshwater mussel, mussel, clam etc. I. thick wall / coat / testa.	
	(b) Protective / camouflage; hard / tough / rigid; from predators / being eaten / prevent drying out / pressure or waves or depth of water;		[max 2]		
	(c) (i)	mollusc;	[1]	Accept reasonable spelling	
	(ii)	length in Fig. 2.1 – 38 to 41 mm; scale line is 25 mm = 0.5 cm – 1/5th or ÷ 5; actual size;	[3]	Check if within range A. in range 7.4 to 8.2 mm	
	(d)	animal tube: colour - yellow - (acidic); explanation - CO ₂ / high CO ₂ / carbonic acid; from respiration; waterweed tube: colour - purple - (alkaline); explanation - low CO ₂ / CO ₂ used up / taken in / AW; by photosynthesis;	[max 5]	Some Centres used universal indicator. Acid – red Alkaline – blue / purple. 2 marks for colour in each 3 marks for explanation.	
			[Total: 15]		