UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS **GCE Ordinary Level**

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for the guidance of teachers

5090 BIOLOGY

5090/31

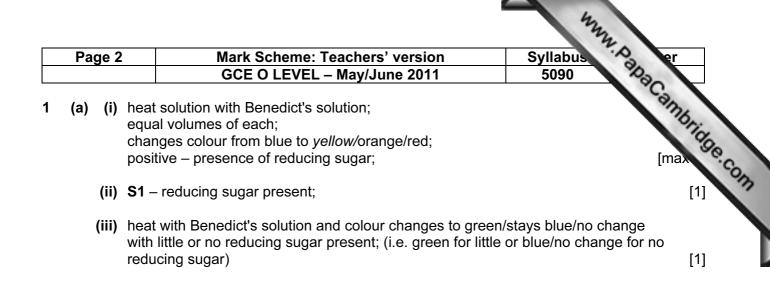
Paper 3 (Practical Test), maximum raw mark 40

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

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

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

Cambridge is publishing the mark schemes for the May/June 2011 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



(b) (i) and (ii)

Table 1.1

	length of potato strip / cm		
	Α	В	С
initial length	5.0	5.0	5.0
measured length			
change in length			

Allow 1 mark for correctly completing two columns and 2 marks for completing three columns (including + / - signs in the change in length column) [

[max 2]

(iii) A – S1 solution – decreased length; exosmosis / absorbed water from potato / AW; B – S1 and water – stayed nearly the same; water in = water out / AW; C – water – potato absorbed water – increased in length; endosmosis;

[max 4]

[Total: 11]

Pa	ge 3	Mark Sche	me: Teachers' vei	rsion	Syllabus A	er
		GCE O LE	VEL – May/June 2	2011	5090 203	
(a)	(i)					any
			Table 2.1		Syllabus 5090 Pution / cm ³	Tidge
			volume	e of vitamin C sol	ution / cm ³	
			1 st reading	2 nd reading	3 rd reading	
		initial volume				
		final volume				
		volume used to make the blue colour disappear				
	1	Decimal places given at l	east in one of the c	columns		[3]
	Prac	tical Test calculate difference betwe			mplete last row in	
		Table 2.1 – this will be ba				[1]
	(iii)	comment on reliability / a	ccuracy / minimize	errors;		[1]
	(iv)	mean value (units) based	on values in Table	e 2.1;		[1]

(b) (i)

Table 2.2

			volume of S2 / cm ³]
		1 st reading	2 nd reading	3 rd reading	
	initial volume				
	final volume				
	volume of S2 used to make the blue colour disappear.				
	Decimal places given in a	at least one of the o	columns		[3]
(ii)	volume difference;				[1]
(iii)	mean value (units) based	on values in Table	e 2.2;		[1]
(iv)	S2 greater or less than vi	tamin C solution;			[1]
(c) (i)	X names and bars space A axes orientation and lat S scale on <i>y</i> -axis to fill me P plot;	bel;	;		
	B bars not touching;				[max 4]
(ii)	3100 ÷ 50 = 62 times / gr	eater;			[1]

Page 4		Syllabus er
	GCE O LEVEL – May/June 2011	5090 23
cond sam sque mea test calc	s collected / harvested at same time; ditions of storage – dark; cool; ple at regular intervals / every week etc; eeze / extract juice; asure volume; with DCPIP; ulation/plot graph/tabulate etition of sample;	Syllabus 5090 Encomption [max
· · ·	vent scurvy / bleeding gums / AW; not be made by body;	[max
		[Total: 2
	drawing: larger than specimen with clear outline / no sha attachment end detail; correct number of parts;	iding;
	claw at end;	[
(ii)	front leg length and back leg length with units;	
• •	ratio expressed;	[
		[Total: