UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS GCE Ordinary Level

MARK SCHEME for the October/November 2008 question paper

5090 BIOLOGY

5090/03

Paper 3 (Practical Test), maximum raw mark 40

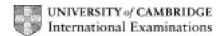
This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began.

All Examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

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.

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	Page 2)	Mark Scheme	Syllabus	Paper
				GCE O LEVEL – October/November 2008	5090	03
1			alter	e 1.1 completed realistically to 10 min; nating correctly; ing (of both) and final air temperatures recorded, with	units;	[3]
	(a)	(i)	1. a [N 2. o [a 3. p 4. b	oh marks: xes labelled 'time/min' & 'temp/°C' N.B. correct origin for <i>y</i> -axis] rientation (<i>x</i> – horizontal), suitable size (> 6 × 6 cm) and the least 1 cm between curves] lots <u>clear</u> and accurate oth curves well done (ruled or best fit curve) urves distinguished and identified	d scale	[5]
		(ii)	(both	diverging; n) levelling out/constant/reduced gradient; n) decreasing; ways above A ;		[max 2]
	(b)	(i)	later	ooration; nt heat; t) from cup/water;		[max 2]
		(ii)	evap	eat) glands (secrete sweat); poration takes heat/causes cooling; ing skin/blood/body;		[max 2]
		(iii)	ref. o	able sweating/receptor control AW; constant body temperature; vasodilation/ref. hair;		[max 2]
	(c)	replicate; stir contents (with thermometer); lid with hole allowing it to remain in place; 2 thermometers; qualified wetting (time, volume, etc.); equal volumes of water; qualified more cups; OVP e.g. constant environment/no draught;				[3] [Total: 19]
2	(a)	(i)	 a tr 	ving marks: t least 5 cm realistic, clear and clean ri-partite, (good proportions) ascular bundles shown in skin		[3]
		(ii)	2–5 inne	ving marks: rows of vascular bundles r bundles larger cation of vessels/staining		[3]

Page 3	Mark Scheme	Syllabus	Paper
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(iii) c	early shown where measured;		
` ,	th dimensions clear, units once at least;		

both dimensions clear, units once at least; correct expression for calculation; correctly expressed; up to 2 d.p. rounded up/down no more than 0.2

[4]

(b) (i) two from: fruit wall/pericarp/epicarp;

tripartite/other division/placentas;

vascular tissue/veins;

[2]

[3]

(ii) in Table 2.1 three from:

W1

wide/thick closer/more/rows of vascular bundles yellow/pale green angular/rough/ridged OVP; W2

thin/narrow;

single layer/few vascular bundles;

dark and light green etc.;

smooth;

J.,

(iii) in Table 2.2 two from: W1

no/small seeds

firm/fleshy/dry brown seeds

OVP;

W2

seeds present/large; succulent/moist/jelly, etc.;

green/white seeds;

[2]

(c) bananas of different age/same banana ageing;

apply iodine test;

colour lessens AW; [R: blue]

apply Benedict's test;

more positive result/green – yellow – red, later/when riper;

verifies the hypothesis;

ref. uniform samples/test reagents;

replicates;

[max 4]

[Total: 21]