#### UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

# MARK SCHEME for the November 2004 question paper

# 0610 BIOLOGY

0610/05

Paper 5 (Practical), maximum mark 40

This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which Examiners were initially instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began. Any substantial changes to the mark scheme that arose from these discussions will be recorded in the published *Report on the Examination*.

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 discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2004 question papers for most IGCSE and GCE Advanced Level syllabuses.



# **Grade thresholds** taken for Syllabus 0610 (Biology) in the November 2004 examination.

	maximum	mir	nimum mark re	equired for gra	de:
	mark available	А	С	Е	F
Component 5	40	33	28	22	18

The threshold (minimum mark) for B is set halfway between those for Grades A and C. The threshold (minimum mark) for D is set halfway between those for Grades C and E. The threshold (minimum mark) for G is set as many marks below the F threshold as the E threshold is above it.

Grade A\* does not exist at the level of an individual component.



PMT

November 2004

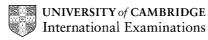
INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 40

SYLLABUS/COMPONENT: 0610/05

BIOLOGY (Practical)



Page 1	Mark Scheme	Syllabus	Paper
	<b>BIOLOGY – NOVEMBER 2004</b>	0610	5

# 1 (a) (i) (exposed surface) dark <u>and</u> (unexposed surface) light in colour;

### (ii) 1 mark for <u>both</u> colours correct

#### 1 mark for <u>each</u> correct pH

	solution	
	A1	B1
colour	red/orange	blue/green;
pН	2 - 5;	8 - 10;

(iii) ruled lines and headings;

pale/no change/little change, in dish A;

dark in dish B;

(iv) A1 is more acidic than B1;

enzyme (involved);

does not work/works slightly, in acid conditions;

produces coloured products/enzyme works, in alkaline solutions;

on exposure to air;

(v) suitable method to exclude oxygen;

one test in air (for comparison);

control/fair test;

same surface area of tissue exposed;

suitable pH;

repeat;



3

3

1

max 2

max 5

Page 2	Mark Scheme	Syllabus	Paper
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## (b) (i) Allow ecf for conclusion following incorrect observation.

test	W1	
iesi	observation	conclusion
iodine solution	blue/black	starch present;
biuret reagents	stays blue/ no change/ does not turn purple	protein absent;

(ii) use/add, Benedict's reagent;

heat;

colour change to, green/yellow/red;

3

(6)

4

# [Total 21]

**2** (a) (i) Drawing - [see supervisor's report]

clear outline W2;

at least 10 cm in one direction;

shape (showing at least 3 leaflets);

proportion;

detail of venation;

(detail) on a pair of leaflets;

Labels - any 4 from leaflet lamina/leaf blade midrib vein margin petiole/leaf stalk stipule AVP;;;; (max 4) PMT

neme Syllabus Paper EMBER 2004 0610 5	
	(ii) dicotyle
of veins/AW;	broad le
	(b) (i) upper e
	lower e
	palisade
	spongy
oongy stated to contain chloroplasts nesophyll; max	both ar
	(ii) <u>air</u> spac
be seen to gain 3 marks. be seen at least once for 3. sing = 2 ticks = 2 marks. s if measurement incorrect, using his	No unit Correct
).6 cm];	thicknes
	÷ by 20
m/0.0475 - 0.053 cm]; max	correct
[Total 19	