

CAMBRIDGE
INTERNATIONAL EXAMINATIONS

JUNE 2002

INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK : 45

SYLLABUS/COMPONENT : 0654/5

**CO-ORDINATED SCIENCES
(PRACTICAL TEST)**



UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

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Mark Scheme for Q1

- | | | |
|--------|---|---|
| (a) | brief description and result. Allow cold water | 2 |
| (b)(i) | pH between 8 and 9 (can be varied to match supervisor) | 1 |
| (ii) | pH has increased(ONE) | |
| | colour changes described showing move towards dark blue(ONE) | 2 |
| (c) | glowing splinter not relit (ONE) | |
| | limewater milky therefore carbon dioxide(ONE) | 2 |
| (d) | effervescence or equivalent BUT not gas off
no ppt. OR sulphate produces a ppt. | 2 |
| (e) | litmus blue(ONE) ammonia (ONE) | 2 |
| (e) | description to include
adding P to some acid
practical observation of a drop in temp.
deciding it is endothermic | 3 |
| (g) | solid is potassium hydrogencarbonate | 1 |

total 15

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Mark Scheme for Q2

	Length in mm	
	Current in mA and bear some resemblance to SV	
	Good spread of length values 2 values either side of 400mm	
	Current decreases with increase length	
	Six sets of values	5
Graph	Scale sensible	
	Plotting for 4 results is correct	
	suitable curve	3
readings	<u>reading off from graph</u> correctly (graph must include 1000mm)	1
calculation	correct calculation	
	value within 10% of supervisors value	2
	diagram shows voltmeter, ammeter and resistor in circuit	
	each of the above correctly placed in circuit allow one mark if voltmeter is correctly placed.	2
	measure current & voltage	
	show these are proportional	2
	total	15

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Mark Scheme for Q3

- (a) suitable temperature/light 1
- (b)(i) table showing 3 columns
columns must describe germination & growth
change in germination is right order
change in growth is right order 4
- (ii) weak acid rain reduces growth
strong acid rain reduces germination/prevents growth etc
acid rain denatures enzymes or destroys seed 3
- (c)(i) good quality drawing (sharp pencil, at least 5cm)
root is labelled
leaves/stem etc labelled 3
- (ii) suitable value for length of seedling (reasonable value)
accurate measurement from diagram allowing 3mm tolerance
correct calculation 3
- (d) no minerals OR no nutrients 1

total 15