

JUNE 2002

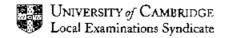
INTERNATIONAL GCSE

MARK SCHEME

MAXIMUM MARK: 45

SYLLABUS/COMPONENT: 0654/5

CO-ORDINATED SCIENCES (PRACTICAL TEST)



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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

VIAIK SCH	tille 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
Ch		
Graph	Scale sensible	
	Plotting for 4 results is correct	
	suitable curve	3
readings		
	reading off from graph correctly (graph must include 1000mm)	I
calculatio	n	
	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