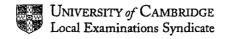


NOVEMBER 2002

GCE Advanced Subsidiary Level

MARK SCHEME MAXIMUM MARK: 25 SYLLABUS/COMPONENT: 9700 /3 BIOLOGY (PRACTICAL (AS))



Page 1	Mark Scheme	Syllabus	Paper
	AS Level Examinations – November 2002	9700	3

Qn	Expected Answers	Mark	Additional Guidance
<u></u>		,	
1 a	10 10	1	
	15 5	1	
	20 0	1	
4.5	014 > 50	1	
1 bi	0M > 50 mm 0.75M & 1M < 50 mm	1	
}	change in length calculated correctly	1	
	mean calculated correctly	1	# W
	+ and - signs used correctly	. 1	- signs must be used
	+ and - signs used correctly	,	- signs must be used
1 b ii	axis correctly orientated with units and scale correct	1	•
1 ' ' ' '	all plots correct	1	
	straight line of best fit correct	1	
]	Official street in the street		
1 b iii	water potential of distilled water > than cells		Accept hypo and
	therefore water enters cells		hypertonic if correct but
	water potential of 1M < cells		max 4 if no correct ref to
	therefore water leaves cells		water potential
	correct ref to water potential	Max 5	
1 b iv	correct as read from graph with units mol dm ⁻³	1	
	reason must indicate net movement / equilibrium	1)
	more engurate	1	
1 c	more accurate good reason eg can measure to several decimal	['	ĺ
}	places / length may be cut at angle	1	Any good reason but reject
	places / length may be cut at angle	1	can work out mass / vol of
			water
1 d	Explain how epidermal strips obtained		1
l u	Immerse in soln for > 15 mins	•	
	Place under microscope		
	Determine percentage plasmolysis for each solution		
-	Use 50+ cells each time		
	Plot graph		·.
	Determine 50% plasmolysis		
	Plasmolysis explained / incipient plasmolysis	Max 5	
		25	
		ļ	
		[