

NOVEMBER 2001

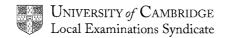
GCE ADVANCED SUBSIDIARY LEVEL

MARK SCHEME

MAXIMUM MARK: 25

SYLLABUS/COMPONENT: 8700/3

BIOLOGY (PRACTICAL)



Page 1 of 1	Mark Scheme	Syllabus	Paper
	AS Level Examinations – November 2001	8700	3

1	(a)	three similar colours – green – a variation of;		1
	(b)	table headings: flask / beaker (contents of); volume of sulphuric acid added in cm³; three burette readings; tube B a value below 3 cm³; value A less than that of C ; two columns (two rows) only and need not be lined; value of C greatest;		5 max
	(c)	ref to molecular effect, enzyme colliding with substrate to give ammonium carbonate; titration gives amount of ammonium carbonate produced; boiling leads to little or no reaction; enzyme is denatured; protein in nature; comparison of amount of product in A and C ;		
		comment on relative denaturation in A ;		5 max
	(d)	A: less product formed;B: same result;		2
	(e)	pH, substrate, temperature (2 of 3);		2
	(f)	control of the variable missing in (e) ; use of replicates; stagger mixing times; perform simultaneous titrations; add inhibitor (boil immediately) to stop enzyme action;		3 max
			[Total:	18]
2	(a)	drawing: accurate number of bundles (between 12 and 18); different sizes shown; shown alternately – minimum 4 bundles;		
		largest bundles have an elliptical shape; positions of both on arc;		5
	(b)	(i) accurate position of line on a radius, min. radial line across whole length of bundle; (if a tangential line is drawn – be critical in its acceptance)		1
		(ii) xylem / phloem in a bundle provided correct line above;		1
			[Total:	7]