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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE A/AS Level

MARK SCHEME for the November 2005 question paper

9700 BIOLOGY

9700/03 **Paper 3** **maximum raw mark 25**

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*.

The minimum marks in these components needed for various grades were previously published with these mark schemes, but are now instead included in the Report on the Examination for this session.

- CIE will not enter into discussion or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the November 2005 question papers for most IGCSE and GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

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Qn			Expected Answers	Marks	Additional Guidance
1	(a)	(i)	**A2** faster / less black than **A3**; **A3** faster / less black than **A1**;	1 1	Order of reactivity **A2 A3 A1** Accept reference to colour or endpoint.
		(ii)	Three from Add suspension to each of three test-tubes; Same volumes; (Pipettes drops) every fixed time interval; Until determined end point described;	Max 3	
	(b)	(i)	0.5	1	
		(ii)	Amylase conc on X axis and both axes labelled with units correct; scale correct; plots correct; points joined correctly;	1 1 1 1	
		(iii)	More enzyme means more <u>active sites</u>; Qualification of above point;	1 1	
	(c)		Different temperatures; Keep enzyme concentration constant; Same time / time for complete hydrolysis;	1 1 1	
				15	
2	(a)	(i)	Four from: Quality i.e. clear single unbroken lines; Four cells only; Spaces between cells, at least three touching; Nuclei drawn at least ¼ smallest width; All very irregular shape;	Max 4	**Accept** three cells out of four for each marking point
		(ii)	Evidence of at least three measurements and mean; Correct working; 10 - 15μm;	1 1 1	Correct answer only = 2
	(b)	(i)	Mitochondria; golgi; EPR; ribosomes; glycogen <u>granules</u>; cell membrane; vesicle; nuclear membrane; lysosome;	2 max	4 correct = 2 marks 3 correct = 1 mark
		(ii)	Greater resolution;	1	**Ignore** magnification
				10	
				Total 25	

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