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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

GCE Advanced Subsidiary Level and GCE Advanced Level

MARK SCHEME for the October/November 2006 question paper

9700 BIOLOGY

9700/03 Paper 3 (Practical 1), 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 instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began.

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 grade thresholds for various grades are published in the report on the examination for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses.

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

CIE is publishing the mark schemes for the October/November 2006 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

UNIVERSITY of CAMBRIDGE
International Examinations

Qn	G	Expected Answers	Marks	Additional Guidance
1 a		K3 freshest; K5 driest; K4 in between the other two;	1 1 1	
1 b		Clear single lines; Stoma / stomata present; Guard cells labelled; Stomata labelled; Less stoma; Cells drawn to same scale;	1 1 1 1 1 1	
1 c		Correct reference to relative number of stomata on each side of the leaf; Transpiration / water loss through stoma; Jelly stops transpiration; Correct reference to transpiration through upper epidermis;	3 max	
1 d		Five from: **Method** Use of potometer / weighing plant / leafy shoot in narrow measuring cylinder; Some explanation of setting up; **Obtaining result** How measure transpiration / movement of bubble / loss in mass / fall in water level; Constant wind speed; Fan distance; change wind speed; Control 2 other variables; Replication; **Total**	5 max **17**	
2 a		Size between 16mm and 20mm / 220; answer correct;	1 1	16mm 0.073 mm 17mm 0.077 mm 18mm 0.082 mm 19mm 0.086 mm 20mm 0.091 mm
2 b		Two from: Are different; Sectioned at different levels; Orientation i.e. oval longitudinal section appears longer; Squashed in preparation;	2 max	
2 c		Two from: Open at bottom / leading to tube; Continuous epithelium; Alveoli coming off; Wider than alveoli / larger space; No or fewer RBC (in epithelium);	2 max	
2 d		Two from: Red blood <u>cells</u>; Absence of (epithelial) nuclei; Idea of thin walls; **Total**	2 max **8**	
		Paper	**25**	

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