CAMBRIDGE
INTERNATIONAL EXAMINATIONS

JUNE 2002

GCE Advanced Subsidiary Level

MARK SCHEME

MAXIMUM MARK : 25

SYLLABUS/COMPONENT :9700 /3

BIOLOGY
(PRACTICAL (AS))

UNIVERSITY of CAMBRIDGE
Local Examinations Syndicate

Qn	G	Expected Answers	Marks	Additional Guidance
1 a i		Any four from: + & - readings; All five averages in correct relative order ie W2 W4 W5 W1 W3 ‘longest to shortest; Units in mm in all cells of left column; 3 out 5 mean lengths calculated correctly; 3 out 0f 5 mean change in lengths correct.	max 4	
1 a ii		W4 to left of W2 } W5 to left of W4 } max 3 marks W1 to left of W5 } W3 to left of W1 } -1 mark for each error (max3)	max 3	
1 a iii		Any three from: Axis correct orientation; scale and labels correct; Plotting correct; Line of best fit ie straight line close to plots.	max 3	} } Based on candidates results. }
1 a iv		Correct reading from graph & units correct	1	Allow extrapolation.
1 a v		Water entering equals water leaving / no net movement.	1	OWTTE
1 b		Any three from: Ensure widths of strips are all same / SA; Use bigger range of solutions (between 0-1 unless all + then allow >1); Larger number of strips / repeat expt; Temperature control; Even drying with paper towel; All strips from same potato; Leave > 20 min; Leave for same time; Increase length of each strip; Cover Petri dish; Weigh. **Total**	max 3 **15**	
2 a		Quality of diagram ie 3 concentric elipses. Outer only can be broken. No cells, shading or stiples. Allow fat line. Ignore blood contents; 2 layers of comparable thickness; wall width : overall width 1:4 – 1:8 Tunica media / elastic, labelled; Tunica adventia / connective, labelled;	max 4	Allow fat label
2 b		Diameter of aorta 1 – 5 mm divided into diagram size; Calculation correct;	1 1	Accept cm if used for both. Accept written explanation of method. Bold answer allowed if within parameters.
2 c		Four from Wall is thick; To withstand pressure; Wall crinkled / elastic tissue in wall; To stretch / recoil Inner lining crinkled; **Total**	Max 4 **10**	Accept prevents bursting OWTTE