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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

9700/05 Paper 5 (Practical 2), maximum raw mark 30

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.

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International Examinations

Qn	G	Expected Answers	Marks	Additional Guidance
1 a		Table with data and correct order of headings; S1 saliva; S2 urine with glucose; S3 urine with protein; S4 normal urine;	1 3	 4 = 3 3 or 2 = 2 1 = 1
1 b		Five from: tested all solutions for protein; two / S1 <u>and</u> S3 gave positive result; add starch / S5 to S1 and S3; leave for time / water bath; add Benedict's; heat at or above 80°C; solution that now turns green to red (is saliva);	 5 max	 ecf for positive protein
1 c		Six from: test urine with Benedict's to get colour; use range of solutions with known glucose concentrations; and test with Benedict's; same volumes; compare urine result against range results; semi quantitative; filter precipitate; get mass; use colorimeter; **Total**	 6 max **15**	
2 a		Three from: Plan drawing with no cells; Quality of drawing <u>and</u> whole kidney / sector; 2 correct labels from cortex; medulla; pelvis;	 3 max	 Longitudinal text book diag = 0
2 b i		Two from: Rounded; indentations; Surrounded by renal space / Bowman's capsule; Darker / more nuclei;	 2 max	
2 b ii		Six from: Single renal capsule drawn; Quality; Tubule diameter between 1/3 and 2/3 glomerulus diameter; Tubules labelled; Glomerulus labelled; Renal / Bowman's capsule (space) labelled; Nuclei of tubule epithelial cells labelled;	 6 max	 Text book diagram with brush border = max 3
2 b iii		Answers will vary but 1 mark for dividing measured width of tubule / 0.07; Correct answer;	 1 1	 Any number / 0.07 =1 Make sure measurement is of tubule and correct calculation
2 b iv		Preparation anomalies; Idea of tubules cut at angle to slide; **Total**	1 1 **15**	
		Paper	**30**	

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