UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2007 question paper

0653 COMBINED SCIENCE

0653/05 Paper 5 (Practical Test), maximum raw mark 30

This mark scheme is published as an aid to teachers and candidates, 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.

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1 **(a)** **(i)** clear drawings; ONE
with visible differences between raisins (raisin **A** should be larger in size and [illegible] than raisin **B**); ONE

(ii) raisin **A** has become larger/rounder; ONE
water has entered the raisin; ONE [2]

(b) **(i)** first row of table below completed correctly; –1 for each incorrect to zero [2]

(ii) second row of table below completed correctly; –1 for each incorrect to zero [2]

test on urine	sample **D**	sample **E**	sample **F**	sample **G**
Benedicts test	**blue**	**blue**	**red**	**blue**
protein test	**blue**	**blue**	**blue**	**lilac**

Allow orange for red. Allow purple or violet for **G** protein test

(iii) (diabetes) sample **F**;
(kidney failure) sample **G**; [2]

[Total: 10]

2 **(a)** stating the value of resistance/m
should be the same as supervisor and also candidates should have the same value as each other [1]

(b) & (c) 5 values of **y** and ***I*** [2]

(d) **(i)** ***R*** is correctly calculated

current decreases with increasing **x** (but ***I*** should be less than 1) [1]

(ii) ***IR*** is calculated correctly

2 dp used [2]

(e) Graph

S sensible scale used and axes labelled

P plotting correct (allow one error)

C smooth curve drawn

Origin included [4]

[Total: 10]

3 **(a)** **X** is colourless/cloudy/stayed the same
Y is pink
Z is pink
all three need to be correct to score the mark

X is an acid
Y is an alkali
Z is an alkali [2]

each incorrect –1 to zero

(b) test correctly described TWO marks acidifying not necessary

acid is hydrochloric ONE [3]

test can be for sulphate showing negative therefore must be chloride
there must be evidence that the candidate actually performed the test

(c) **(i)** pink colour disappears/colourless but not clear [1]

(ii) pink colour disappears/colourless but not clear

effervescence [2]

(d) **Z** could be sodium carbonate [1]

[Total: 10]