

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2005 question paper

0654 CO-ORDINATED SCIENCES

0654/05

Paper 5 (Practical Test), maximum raw mark 45

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.

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Question 1

- (a)(i) goes blue/black;
starch present; [2]
- (ii) stays blue / very slight change to green;
no / very little reducing sugar present; [2]
- (b)(i) red colour observed;
reducing sugar present; [2]
- (ii) no/ very little reducing sugar present in seeds sample **A**;
reducing sugar present in germinated seeds sample **B**;
sugar is needed for respiration / energy for growth;
starch broken down to sugar in seeds;
by enzymes;
sugar produced by shoots/coleoptiles/leaves (if present); [4 max]
- (c)(i) colour observed is brown;
no starch present; [2]
- (ii) yes;
all living cells contain protein;
(however, if the candidate has actually done this test it will come out negative because
there is not enough protein to give a positive reaction, so if the candidate writes:
no;
there is not enough protein to show a positive reaction;
they should be given 2 marks) [2]
- (iii) the biuret test; [1]
- [Total: 15]**

Question 2

Table is neatly drawn showing all results

Each column correctly headed

Mass in whole numbers of gms

Masses are about 10 g apart

Times are recorded to whole no. of seconds

Time for 1 swing is correct [6]

(c) Length is recorded between 450 and 550 mm [1]

(g) more accurate [1]

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Graph

axes correct

scale is sensible

plotting correct

line is straight (horizontal) [4]

(i) makes no difference [1]

(j) change length of string several times
measure time as before [2]

Question 3

(a)(i) turns yellow [1]

(ii) white [1]

(iii) limewater milky
litmus no change [2]

(iv) carbon dioxide because limewater milky [1]

(v) A is a carbonate [1]

(b) add acid (one) effervescence (one) [2]

(c)(i) goes white (one) water evolved (one) smoke (one) goes brown (one)
three suitable observations required [3]

glowing splint does not relight

moist blue litmus turns red [2]

(d) add sodium hydroxide (one) maybe blank dirty green ppt.(one) [2]