

CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the October/November 2014 series

0653 COMBINED SCIENCE

0653/52

Paper 2 (Practical Test), maximum raw mark 30

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- 1 (a) full set of results (colours) recorded for tube **A** ;
 full set of results (colours) for tube **B** ;
 correct trend for tube **A** (later samples are brown/orange) ; (*check Supervisors results*)
 correct trend for tube **B** (all blue-black) ; [4]
- (b) amount of starch reduces / no starch by end of experiment ;
 brown colour appears when no more starch present ;
 starch (is) digested / starch (is) broken down by the amylase ; [3]
- (c) (i) starch is still present ; [1]
- (ii) amylase is, denatured / not working / inactive ;
 starch is not broken down ; [2]
- [Total 10]**
- 2 (a) (i) initial temperature of **P** recorded to nearest 0.5°C; [1]
- (ii) sensible final temperature of **P** (*expect **increase** of 2–4 °C*) ; [1]
- (iii) sensible final temperature of **Q** (*expect **decrease** of 1–2°C*) ; [1]
- (b) both temperature changes correct (ignoring signs) ;
 both signs correct ; [2]
- (c) (i) blue ppt. ;
 dark blue solution / deep blue solution / purple solution ;
 copper / Cu²⁺ / copper(II) ; (*depends on observation of blue*) (**not Cu**) [3]
- (ii) sodium hydroxide solution **AND** blue ppt. ; [1]
- (iii) white ppt. **AND** chloride ; [1]
- [Total: 10]**

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- 3 (a) (i) sensible l_0 (check Supervisors values) recorded to the nearest millimetre ; [1]
- (ii) values of m (100 g) and l present in the table ; [1]
- (iii) extension calculated correctly (for 100 g) ; [1]
- (iv) all readings present of mass and length present ;
all lengths increasing down the table ;
all extensions correct ; [3]
- (b) suitable choice of linear scales ;
4 points plotted correctly to $\pm \frac{1}{2}$ small square ;
good best fit straight line judgement through origin ; [3]
- (c) (directly) proportional ; [1]

[Total: 10]