

**MARK SCHEME for the October/November 2010 question paper
for the guidance of teachers**

0653 COMBINED SCIENCE

0653/51

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, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

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- 1 (a) (i) entered in Table 1.1
A, B, D blue ;
C, E purple ;
(ii) C and E ; [1]
- (b) (i) entered in Table 1.1
B, blue / black ;
A, D brown / yellow / orange ; [2]
(ii) solution B ; [1]
- (c) (i) entered in Table 1.1
A, blue ;
D, red / orange ; [1]
(ii) (solution) D ; [1]
- (d) add both protein solutions to starch solution ;
test with Benedict's solution amylase produces a positive result for reducing
sugar ; [2]

[Total: 10]

- 2 (a) in Table 2.1
sensible readings for current (less than 1 A) and voltage ;
current is about half when both lamps connected ;
voltage is about the same (+/- 10 %) ; [3]
- (b) product of p.d. and current is correct for figures ; [1]
- (c) statement fits results ;
the results confirm the original statement ;
(only 1 mark if candidate fails to recognise correct answer) [2]
- (d) current is greater than when 1 lamp used ;
units correct in either table ; [2]
- (e) statement fits results ;
the results confirm the original statement ;
(allow 1 mark if results 'do not fit' and the correct reasoning is also given). [2]

[Total: 10]

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- 3 (a) solid turns white ;
then brown (black acceptable) ;
white smoke ;
(allow reference to sulfur dioxide / sublimation in lieu of marks allocated to change of solid) [3]
- (b) litmus blue ;
ammonia ; [2]
- (c) (i) green ; [1]
(ii) white ppt. ; [1]
- (e) iron(II) ; ammonium ; sulfate ; (**one** mark for each) [3]

[Total: 10]