

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

0654 CO-ORDINATED SCIENCE

0654/51

Paper 5 (Practical), maximum raw mark 45

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- 1 (a) (i) entered in Fig. 1.1
A, B, D blue ;
C, E purple [2]
- (ii) **C** and **E** ; [1]
- (b) (i) entered in Table 1.1
B, blue / black ;
A, D brown ; [2]
- (ii) solution **B** ; [1]
- (c) (i) entered in Table 1.1
A, blue ;
D red ; [1]
- (ii) solution **D** ; [1]
- (d) (i) put starch in two test-tubes and add some of each protein solution ;
test both solutions with Benedict's reagent ;
positive result with amylase solution ; [3]
- (ii) red colour with solution **C** ;
negative (blue) colour with solution **E** / no reaction ; [2]
- (iii) any **two** suitable, e.g.
same amount of each test solution / Benedict's solution ;
same reaction time for each tube ;
same temperature ; [max 2]

[Total: 15]

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- 2 (a) in Table 2.1
correct units for current and voltage and power ;
sensible readings for current and voltage ; (less than 1 A) [2]
- (b) (i) current is about half when both lamps connected ;
voltage is about the same ; [2]
- (ii) product of p.d. and current is correct for figures ; [1]
- (c) statement fits results ;
the results confirm the original statement ; [2]
- (d) (i) diagram is correct with 2 lamps in parallel with voltmeter ;
complete circuit with ammeter in correct place ; [2]
- (ii) reasonable table drawn ; [1]
- (e) (i) current is greater than 1 lamp used ;
voltage is about the same within 10 % ; [2]
- (ii) product is correct ; [1]
- (f) statement fits results ;
the results confirm the original statement ; [2]

[Total: 15]

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- 3 (a) litmus blue ;
 ammonia ; (max 2)
 solid turns white / grey ;
 then brown (black acceptable) ;
 white smoke ;
 litmus red ; (max 3) [max 5]
 (allow reference to sulfur dioxide or trioxide / sublimation in lieu of marks allocated to change of solid)
- (b) litmus blue ; [2]
 ammonia ;
- (c) (i) white precipitate ; [1]
 (ii) accept precipitate so long as it is **not** white ; [1]
- (d) (i) green ; [2]
 brown or similar ;
 (ii) blue precipitate **or** dark blue solution ; [1]
- (e) iron(II) ; ammonium ; sulfate ; (**one** mark for each correct) [3]

[Total: 15]