

MARK SCHEME for the October/November 2008 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) temperature/amount of water; [1]
- (ii) **A** should be tallest and straight;
B should be shorter and straight;
C should be curved;
(subtract 1 mark for drawings of poor quality) [3]
- (iii) line of table should be filled in
yellow, green, green; [1]
- (iv) values should be as follows:
A should be largest number;
B should be second;
C should be third; [3]
- (b) box **A**, plant grows upwards more quickly/etiolation to reach light (for photosynthesis);
box **C**, plant bends towards the light/phototropism, to improve light capture (for photosynthesis); [2]

[Total: 10]

- 2 (a) value of **E** correct. *Do not allow if clearly not mm
allow if values are reversed* [1]
- (c) and (d) **FOUR** complete sets of readings i.e. for 20 oscillations values are different
T correct *must have at least 3 readings of 20 osc*
T² correct to 2 dp [3]
- (e) scale is sensible
plotting correct
best straight line for their points and is reasonable st. line [3]
- (f) gradient is shown on graph for any reasonable st.line
correctly calculated
if line is made up of parts, NO marks for (f)
allow if area involving the plots is used [2]
- (g) correctly calculated for candidate's figures [1]

[Total: 10]

- 3 (a) (i) white ppt *Do not allow 'milky'* [1]
- (ii) fizzes
pops
hydrogen *only if 'pops' is given* [3]

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- (iii) effervescence/bubbles OR Mg disappears
it is an acid or contains H⁺ [1]
- (iv) contains sulfate
allow one if simply says sulfuric acid [2]
- (b) addition of sodium hydroxide allow Na₂CO₃ or aq NH₃
red brown ppt
iron(III) *must have correct test to score this mark* [3]

[Total: 10]