MARK SCHEME for the May/June 2010 question paper

for the guidance of teachers

0653 COMBINED SCIENCE

0653/52   Paper 52 (Practical Test), maximum raw mark 30

UNIVERSITY *of* CAMBRIDGE
International Examinations

1 (a) measurements entered correctly;
and clearly in mm;   [2]

(b) correct method for calculating average;
correct answer according to candidate's data;   [2]

(c) range calculated correctly according to student's data;   [1]

(d) correct number of complete squares;
correct number of greater-than-half incomplete squares;
correct calculation of area;   [3]

(e) any suitable factor + explanation
e.g.
variation in light intensity/carbon dioxide;
gives different rates of photosynthesis;

can also have different water/mineral availability   [2]

[Total: 10]

2 (a) mass of can to nearest gram;   [1]

(b) recorded to nearest 0.5 ^{o}C;   [1]

(c) (i) sensible temperature measured to 0.5^{o}C;   [1]

(ii) sensible volume of water;   [1]

(iii) mass of water, m_2;   [1]

(d) each correctly calculated;   [2]

(e) correct substitution;
correct calculation;
comparison with supervisor;   [3]

[Total: 10]

3 **(a)** all readings for 4 experiments;;
one mark if any space in the timing columns [2]

(b) values across table increase;
values down each column decrease; [2]

(c) sensible scale;
plotting correct;
suitable curve drawn; [3]

(d) rate increases with concentration;
more gas at any given time with the 2 M; [2]

(e) gas still being released; [1]

[Total: 10]