UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the May/June 2009 question paper

for the guidance of teachers

0620 CHEMISTRY

0620/05 Paper 5 (Practical Test), maximum raw mark 40

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1 Table of results

Initial temperature boxes completed correctly i.e. increasing downwards (1)
Final temperature boxes correctly completed i.e. lower or the same (1)
Average temperature boxes correctly completed (1)
Times completed correctly i.e. descending (1) in seconds (1) [5]

(a) 5 points correctly plotted (2), –1 for any incorrect
smooth line graph is a curve (1) [3]

(b) pale yellow/cream/white (1) not cloudy/milky [1]

(c) **(i)** experiment 5 (1) [1]

(ii) more energy owtte (1) particles move faster (1) more kinetic energy = 2 more collisions (1) [3]

(d) idea of a fair test/to compare effect of changing the temperature (1) [1]

(e) **(i)** value from graph (1) unit (1)
extrapolation shown (1) [3]

(ii) curve sketched on grid below original curve (1) [1]

(f) change e.g. use of data logger/colourimeter (1) or use of lagging/insulation /repeat experiments/use a burette or pipette

explanation e.g. timing of reaction more accurate (1) to reduce heat losses /average readings for times/more accurate volumes [2]

[Total: 20]

2 tests on solid **S**

(a) black (solid) see (d)

(b) effervescence (1)
splint ignites/catches fire or glows brighter (1) [2]

(c) blue (1) [1]

(i) blue (1) precipitate (1) [2]

on heating turns brown/black/darkens (1) [1]

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(ii) blue (1) precipitate (1) [2]

with excess dissolves/clears (1) deep/royal blue (1) [2]

(iii) white (1) precipitate (1) [2]

(d) black/dark brown solid (1) MUST HAVE **(a)** correct as well [1]

(e) effervescence (1) splint relights (1) ignore pops [2]

(f) **(i)** **V** is more reactive/faster or converse (1) [1]

(ii) oxygen (1) [1]

(g) copper (1) oxide (1) reacts with sulfuric acid to form copper sulfate (1) max 2 [2]

(h) catalyst/transition metal/manganese oxide (1) [1]

[Total: 20]

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