## UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

**International General Certificate of Secondary Education** 

## MARK SCHEME for the May/June 2010 question paper for the guidance of teachers

## 0620 CHEMISTRY

0620/63

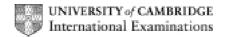
Paper 63 (Alternative to Practical), maximum raw mark 60

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1 (a) Bunsen (burner) (1) tripod (1) condenser (1) [3] (b) (i) F (1) allow description (ii) G (1) allow description [2] 2 (a) pestle and/or mortar (1) accept diagram not bowl/crusher [1] (b) pour off/out liquid owtte (1) not separate/filter [1] (c) chromatography/chromatogram (1) apply solution to paper (1) use of (named) solvent (1) not water conclusion/results/spots at different levels (1) all marks can be scored from a labelled diagram dipping paper in green solution = max 2 [4] 3 (a) volumes completed correctly 0, 20, 26, 41, 45, 46 -1 for each incorrect [3] (b) points plotted correctly including origin (3) -1 for each incorrect smooth curve (1) [4] (c) point at 2 minutes (1) off curve owtte (1) [2] (d) steeper curve (1) levels out at same volume (1) [2]

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(a) Table of results for Experiment 1 temperature boxes completed correctly (2), -1 for each incorrect 23 25 27 26 25 24 23	[2]
(b) Table of results for Experiment 2 temperature boxes completed correctly (2), -1 for each incorrect 23 33 35 33 31 29 27	[2]
(c) all points correctly plotted (3), -1 for any incorrect smooth line graphs (2) or two intersecting straight lines labels (1)	[6]
(d) value from graph ±1 small square (1) shown clearly (1)	[2]
(e) (i) experiment 2 (1)	[1]
(ii) acid D more concentrated (1) stronger (1) more collisions (1)	max [2]
(f) to clean it/remove acid C owtte (1) room temperature or initial temperature from table (1) reaction finished owtte (1)	[1] [2]
Tests on solid <b>E</b>	
(c) (i) white (1) precipitate (1) no change with excess/insoluble (1)	[3]
(ii) no reaction/thin/slight precipitate (1)	[1]
(d) contains water/hydrated (1)	[1]
(e) not a sulfate (1) accept not a carbonate	[1]
(f) ammonia (1) not ammonium	[1]
(g) nitrate (1) hydrated salt (1) not a sulfate (1) not a carbonate (1) max [2]	[2]

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6 (a) electrolysis (1) [1] (b) platinum/graphite/carbon (1) [1] (c) (blue) litmus/universal indicator paper/pH paper (1) bleaches/turns white (1) [2] (d) hydrogen (1) [1] 7 add (named) acid/water/salty water to piece of copper/steel (1) heat (1) for specified/same time (1) observe reaction/effect (1) repeat with other metal (1) compare metals (1) [6] no reagents = 0 marks or heat metal (1) repeat with other metal (1) method for measuring conductivity (1) max [3] [3]