CAMBRIDGE INTERNATIONAL EXAMINATIONS

Cambridge International General Certificate of Secondary Education

MARK SCHEME for the March 2015 series

0620 CHEMISTRY

0620/52 Paper 5 (Practical), maximum raw mark 40

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1 (d) Table of results

total volume of water boxes completed correctly (1),

10, 12, 14, 18

temperature boxes completed (1)

values decreasing (1)

comparable to supervisor's results (2) ±10 °C [5]

(e) appropriate scale for y axis (1)
note: must use at least 4 large squares vertically to plot points

all points correctly plotted (3),
all 4 correct (3)
3 correct (2)
2 correct (1)
1 or fewer correct (0)
note: origin should not be included

smooth line graph (1) [5]

(f) value from graph for 20 cm^3 water (1) ± half a small square

shown clearly by extrapolation(1) [2]

(g) clear / colourless liquid forms / no solid / crystals / salt visible owtte (1) [1]

(h) salt would not all dissolve (1)

use of figures (1)
e.g. only 5.7 g would dissolve in 10 cm^3 water at 100 °C [2]

(i) sketch graph above line (1)

label (1) [2]

(j) any **one** improvement from: (1)

do not remove thermometer from solution
use IT method / second person to note formation of crystals
repeat
do separate experiments
use smaller volumes of water
loss of water through boiling/evaporation

linked explanation (1)

loss of solid on thermometer
observing formation of first crystals may vary
average
more results to plot on graph
method of avoiding evaporation [2]

2 tests on solution **E**

(a) yellow / green / colourless, [1]

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

(c) green precipitate (1) [1]
indicator paper turns blue (1)

pungent smell (1) [2]

turns brown (1) [1]

(d) appearance pink to colourless / pale yellow (1) [1]

brown (1) precipitate (1) [2]

tests on solution **F**

(e) **(i)** yellow solution (1) [1]

(ii) pH 1–3 (1) [1]

(f) any **three** from:
green (1) blue(1) lavender / purple / lilac (1)

effervescence (1) [3]

(g) iron (1) (II) (1)

ammonium (1) sulfate(1) [4]

(h) any **two** from:
transition metal (1)

different valencies (1)

acidic solution(1) [2]