



**CHEMISTRY**

**0620/53**

Paper 5 Practical Test

**May/June 2014**

CONFIDENTIAL INSTRUCTIONS

**Great care should be taken to ensure that any confidential information given does not reach the candidates either directly or indirectly.**

**READ THESE INSTRUCTIONS FIRST**

The teacher responsible for preparing the examination is **not** allowed to consult the question paper before the examination. Teachers should, as part of the preparation of the examination requirements, carry out any tests indicated on page 2 in order to satisfy themselves that the supplied materials are satisfactory.

The standard Report Form to be included with the scripts is given on pages 7 and 8. Please detach and enclose it with the scripts. If scripts are despatched in more than one envelope, it is essential that a copy of the Supervisor's Results and of the Report Form are sent inside **each** envelope.

More material may be issued if required, without penalty, but this should not be necessary. Safety spectacles may be provided if considered necessary.

Supervisors are advised to remind candidates that all substances in the examination should be treated with caution. Please also see under 'General Apparatus' on the use of pipette fillers and safety goggles.

In accordance with COSHH (Control of Substances Hazardous to Health) Regulations, operative in the UK, a hazard appraisal of the examination has been carried out.

Attention is drawn, in particular, to certain materials used in the examination. The following codes are used where relevant.

**C** = corrosive substance

**F** = highly flammable substance

**H** = harmful or irritating substance

**O** = oxidising substance

**N** = harmful to the environment

**T** = toxic substance

Hazard data sheets should be available from your suppliers.

If you have any queries regarding these Instructions, please contact CIE

by e-mail: [info@cie.org.uk](mailto:info@cie.org.uk),

by phone: +44 1223 553554,

by fax: +44 1223 553558,

stating the Centre number, the nature of the query and the syllabus number quoted above.

This document consists of **8** printed pages.

**For Question 1**

*Each candidate will require*

- (a) one 25 cm<sup>3</sup> or 50 cm<sup>3</sup> measuring cylinder
- (b) one beaker, 250 cm<sup>3</sup>
- (c) one polystyrene cup
- [H] (d) 5 g of anhydrous sodium carbonate, Na<sub>2</sub>CO<sub>3</sub>, in a stoppered tube, labelled **solid M**
- [H] (e) 5 g of hydrated sodium carbonate, Na<sub>2</sub>CO<sub>3</sub>·10H<sub>2</sub>O, in a stoppered tube, labelled **solid N** (this should be fine crystals or crushed large crystals)
- (f) access to water and distilled water
- (g) one stirring thermometer, 0–110 °C
- (h) a stop clock or timer, Candidates may use their own watches
- [H] (i) aqueous sulfuric acid of concentration 1.0 mol/dm<sup>3</sup>, labelled **dilute sulfuric acid**
- (j) one 10 cm<sup>3</sup> measuring cylinder
- (k) one test-tube
- (l) teat pipette

**Note:** The anhydrous sodium carbonate should be newly purchased.

**For Question 2**

*Each candidate will require*

- [N] [H] (a) a stoppered test-tube containing about 0.4 g of copper(II) oxide, CuO, labelled **solid P**
- [N] [H] (b) a stoppered boiling tube containing about 0.2 g of copper(I) oxide, Cu<sub>2</sub>O, labelled **solid Q**
- (c) rack of test-tubes
- (d) two boiling tubes and holder
- (e) access to water and distilled water
- [C] (f) aqueous sodium hydroxide of concentration 1.0 mol/dm<sup>3</sup>
- [H] (g) aqueous ammonia of concentration 2.0 mol/dm<sup>3</sup>
- [H] (h) aqueous sulfuric acid of concentration 1.0 mol/dm<sup>3</sup>
- (i) aqueous hydrochloric acid of concentration 1.0 mol/dm<sup>3</sup>
- (j) one 10 cm<sup>3</sup> measuring cylinder
- (k) aqueous potassium iodide solution of concentration 0.1 mol/dm<sup>3</sup>
- (l) a spatula
- (m) teat pipettes
- (n) a Bunsen burner and matches
- (o) a stop clock or timer, candidates may use their own watches

Labels do not need to include concentrations.

**THE SUPERVISOR'S REPORT IS ON PAGES 7 AND 8**

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This form must be completed and returned in the envelope with the scripts.

REPORT ON PRACTICAL CHEMISTRY

JUNE 2014

**1 (a)** Supervisor's Results

It is recommended that the Supervisor should be a chemistry teacher.

The Supervisor is asked to carry out the experiments in Questions 1 and 2 and to record the results on a spare copy of the question paper clearly labelled 'Supervisor's Results'. Failure to enclose these results and this report form may lead to candidates being unavoidably penalised.

**(b)** The candidate numbers of candidates in each session were:

*First session*

*Second session*

2 The Supervisor is invited to report details of any difficulties experienced by candidates giving names and candidate numbers. The report should include reference to:

- (a) any general difficulties encountered in making preparations for the examination;
- (b) difficulties due to faulty apparatus or materials;
- (c) accidents to apparatus or materials.

Other cases of individual hardship, e.g. illness, temporary disability, should be reported direct to UCLES on the normal *Application for Special Consideration* form.

NAME OF CENTRE .....

CENTRE NUMBER .....

SIGNED .....

*Supervisor*

DECLARATION (to be signed by the Principal)

The preparation of this practical examination has been carried out so as to maintain fully the security of the examination.

NAME .....

(in block capitals)

SIGNED ..... (Principal)

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