



CHEMISTRY

0620/05

Paper 5 Practical Test

May/June 2009

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

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: International@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 **5** printed pages and **3** blank pages.



For Question 1

Each candidate will need the following:

- (a) one 50 cm³ measuring cylinder;
 - (b) one 10 cm³ measuring cylinder;
 - (c) Bunsen burner, tripod and gauze;
 - (d) one or more 250 cm³ conical flasks;
 - (e) 250 cm³ of an aqueous solution of sodium thiosulfate, labelled as such (10 g per dm³ of solution);
- [C] (f) 100 cm³ of 2 mol per dm³ hydrochloric acid, labelled 'hydrochloric acid for question 1';
- (g) a stop-clock or timer which can measure to the nearest second; candidates may use their own watches if they are suitable;
 - (h) access to water and distilled water;
 - (i) a thermometer, 0-110 °C.

50 cm³ of sodium thiosulfate solution + 10 cm³ of hydrochloric acid should take approximately 120 seconds to produce sufficient precipitate to obscure a page of printed text.

For Question 2

Each candidate will require:

- [H] (a) a stoppered test-tube containing about 1 g of copper(II) oxide, labelled solid **S**;
- [H,O] (b) a stoppered test-tube containing about 1 g of manganese(IV) oxide, labelled solid **V**;
- (c) rack of test-tubes and one boiling tube;
- (d) Bunsen burner and test-tube holder;
- (e) splints;
- [C] (f) 10 cm³ of 1 mol per dm³ sulfuric acid in a stoppered test-tube;
- [O] (g) 10 cm³ of 5 vol hydrogen peroxide in a stoppered test-tube;
- [C] (h) aqueous sodium hydroxide of concentration 2.0 mol per dm³;
- [C] (i) aqueous ammonia of concentration 2.0 mol per dm³;
- [C] (j) aqueous 1 mol per dm³ hydrochloric acid;
- [T] (k) aqueous barium chloride of suitable concentration to give a positive sulfate test;
- (l) spatulas;
- (m) a 10 cm³ measuring cylinder;
- (n) teat pipettes;
- (o) distilled water.

Labels do not need to include concentrations.

THE SUPERVISOR'S REPORT IS ON PAGES 7 AND 8

THE SUPERVISOR'S REPORT IS ON PAGES 7 AND 8

THE SUPERVISOR'S REPORT IS ON PAGES 7 AND 8

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

REPORT ON PRACTICAL CHEMISTRY

JUNE 2009

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)

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

University of Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.