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 5 and 6. 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.

Supervisors are advised to remind candidates that all substances in the examination should be treated with caution. Safety glasses should be provided.

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,
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.

The syllabus is accredited for use in England, Wales and Northern Ireland as a Cambridge International Level 1/Level 2 Certificate.
For Question 1

Each candidate will require

(a) apparatus for a rate experiment

Note: The trough should be large enough to allow the measuring cylinder to be filled with water in the trough.

(b) two 15 cm strips of magnesium ribbon

(c) 100 cm$^3$ of sulfuric acid of concentration 0.2 mol/dm$^3$, in a beaker labelled acid X

(d) 100 cm$^3$ of hydrochloric acid of concentration 0.2 mol/dm$^3$, in a beaker labelled acid Y

(e) one 250 cm$^3$ conical flask

(f) a stop-clock or timer which can measure to the nearest second

(g) access to water and distilled water

(h) one 100 cm$^3$ measuring cylinder

50 cm$^3$ of acid X + 15 cm of magnesium ribbon should produce approximately 50 cm$^3$ of gas in 3 minutes.

50 cm$^3$ of acid Y + 15 cm of magnesium ribbon should produce approximately 25 cm$^3$ of gas in 3 minutes.
For Question 2

Each candidate will require

[O] [H] (a) a stoppered boiling tube containing about 1 g of calcium nitrate and 1 g of zinc carbonate thoroughly mixed, labelled solids C and D
Note: Calcium nitrate should be freshly purchased.

[C] (b) aqueous sodium hydroxide of concentration 2 mol/dm$^3$, labelled aqueous sodium hydroxide

[H] (c) aqueous ammonia of concentration 2 mol/dm$^3$, labelled aqueous ammonia

[H] (d) limewater and suitable apparatus to test for carbon dioxide, labelled limewater

(e) hydrochloric acid of concentration 1 mol/dm$^3$, labelled hydrochloric acid

(f) aluminium foil

(g) access to water and distilled water

(h) pH indicator papers and chart

(i) rack of test-tubes

(j) splints

(k) one boiling tube and cork or bung to fit

(l) spatula

(m) one 10 cm$^3$ measuring cylinder

(n) one Bunsen burner and matches

(o) test-tube holder

(p) teat pipettes

(q) filtration apparatus: filter papers and funnel

Note: Labels do not need to include concentrations.
THE SUPERVISOR'S REPORT IS ON PAGES 5 AND 6
This form must be completed and returned in the envelope with the scripts.

REPORT ON PRACTICAL CHEMISTRY

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:

<table>
<thead>
<tr>
<th>First session</th>
<th>Second session</th>
</tr>
</thead>
</table>
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 CIE 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)