



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
International General Certificate of Secondary Education

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BIOLOGY

0610/51

Paper 5 Practical Test

May/June 2013

CONFIDENTIAL INSTRUCTIONS

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

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

by email 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 **6** printed pages and **2** blank pages.



READ THESE INSTRUCTIONS FIRST

These instructions give details of the apparatus required by each candidate for each experiment in this paper. A summary of the questions that will be presented to the candidates is included, where appropriate, to allow the Biology teacher to test the apparatus appropriately. **Testing must be done out of sight of all candidates. No access to the question paper is permitted in advance of the examination.** Centres are reminded that candidates are expected to follow the instructions on the question paper and record all their results. They will not be penalised if these results are not what they expect.

The Supervisor should make sure the Supervisor's Report is fully completed and a copy is enclosed with each packet of scripts.

It is assumed that the ordinary apparatus of a science laboratory will be available, including a supply of purified water (distilled or deionised).

If arrangements are made for different sessions for different groups of candidates, care must be taken to ensure that the different groups of candidates are effectively isolated so that **no information passes between them.**

All specimens should carry only the code letters and numbers as indicated and their identity should not be revealed to the candidates.

Supervisors should ensure that all specimens have the correct identity attached to the specimen and that these are **not** removed during the examination.

If a candidate breaks any of the apparatus, or loses any of the material supplied, the matter should be rectified and a note made in the Supervisor's Report.

Supervisors are advised to remind candidates that **all** substances in the examination should be treated with caution. Pipette fillers and safety goggles should be used where necessary.

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.

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

N = harmful to the environment

Centres are reminded that they are **not** permitted to open the question paper envelopes before the examination.

If there are any difficulties with any aspect of setting up this practical examination that the Centre is not able to resolve, it is essential for Centres to contact the Product Manager as soon as possible by **email** to info@cie.org.uk, by **fax** to +44 1223 553558 or by **phone** to +44 1223 553554.

Question 1

Each candidate should be provided with:

- (i) approximately 10 cm³ egg albumen to be supplied in a small beaker, labelled **albumen**
This needs to be from a fresh chicken's egg, stirred to break up the texture but not frothy.
- (ii) three × clean test-tubes
- (iii) means of supporting three test-tubes, e.g. test-tube rack or plastic container
- (iv) means of measuring 2 cm³, e.g. syringe
- (v) means of measuring 1 cm³, e.g. syringe
- (vi) means of labelling test-tubes
- (vii) 2 cm³ distilled **or** deionised water to be supplied in a small beaker, labelled **water**
- [C] (viii) 2 cm³ 2% ethanoic acid to be supplied in a small beaker, labelled **acid**
The acid is prepared by diluting glacial ethanoic acid – care is required.
- (ix) timing device or view of a clock with second hand
- (x) access to paper towels (in case of spillages)
- [H] (xi) Biuret reagent to be supplied in usual dispenser, labelled **Biuret solution**
- (xii) suitable eye protection, e.g. safety glasses
- (xiii) small beaker or container of water, labelled **for washing**

Before the examination, the Supervisor should carry out part of the investigation by slowly adding an equal volume of 2 % ethanoic acid to egg albumen to find out if the albumen changes in appearance. If not, increase the concentration of the acid in small increments and retest.

The Supervisor (**not** the Invigilator) is expected to carry out the practical aspects of **Question 1** and record their results in the space provided in the Supervisor's Report. This must be done during the examination, using the same apparatus and reagents as the candidates but out of sight of the candidates.

Question 2

Each candidate should be provided with:

- (i) ruler (mm)

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This form should be completed and sent to the Examiner with the scripts.

SUPERVISOR'S REPORT ON PRACTICAL BIOLOGY

IGCSE

May/June Session 2013

The Supervisor or Teacher responsible for the subject should provide the following information.

- 1** Was any difficulty experienced in providing necessary materials? If so, give brief details.

.....

.....

.....

- 2** Give details of any difficulties experienced by particular candidates, giving names and candidate numbers. Reference should be made to:

(a) difficulties with specimens or materials;

.....

(b) accidents to apparatus or materials;

.....

(c) any other information that is likely to assist the Examiner, especially if this cannot be discovered from the scripts.

.....

Other cases of individual hardship, e.g. illness or disability, should be reported direct to Cambridge on the normal 'Special Consideration Form' as detailed in the Handbook for Centres.

- 3** During the examination, the Supervisor should, **out of sight of the candidates**, carry out **Question 1**, using the same apparatus and reagents as the candidates. Results should be recorded in the space on page **8** (**not** on a spare Question Paper). The Invigilator should **not** carry out **Question 1**.



- 4 A plan of work benches, giving details of the candidate numbers for the places occupied by the candidates for each session must be enclosed with the scripts.

Declaration (to be signed by the Principal or the Examinations Officer)

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

Signed

Name (in block capitals)

Centre number

Centre name

If scripts are required to be despatched in more than one packet, it is essential that a copy of the Supervisor’s Report and the appropriate seating plan(s) are inside **each packet**.

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