



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

BIOLOGY

5090/31

Paper 3 Practical Test

May/June 2010

CONFIDENTIAL INSTRUCTIONS

1 hour 15 minutes

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 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 **4** printed pages, **2** blank pages and a Supervisor's Report.



INSTRUCTIONS FOR PREPARING APPARATUS

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. **No access to the question paper is permitted in advance of the examination session.**

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.

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.**

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 the 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

Confidential Instructions

Each candidate must be supplied with the following apparatus and materials.

Question 1

Each candidate will require:

- (i) Two 6 cm slices of an unripe (green) banana, labelled **S1** and provided on a flat surface. Leave the 'skin' intact.
- (ii) Two 6 cm slices of a ripe (yellow, speckled brown) banana, labelled **S2**, to be provided on a flat surface. Leave the 'skin' intact.
- (iii) 2 large test-tubes.
- (iv) Sharp knife or scalpel.
- (v) White tile.
- (vi) Iodine solution in shallow dish.
- (vii) Paper towels.
- (viii) Benedict's solution in a labelled container, with dispenser.
- (ix) Water bath.
- (x) Test-tube holder.
- (xi) 2 beakers, each containing 100 cm³ dilute acid, each labelled **S3**.
- (xii) 2 beakers, 100 cm³.
- (xiii) Forceps.
- (xiv) Sight of a clock.
- (xv) Means of labelling beakers, e.g. felt tip pen or marker pen or labels. If a pen is provided, this may also be used in Question 2.

Question 2

Each candidate will require:

- (i) One preserved ground-living beetle (largest available), labelled **S4**.
- (ii) Hand lens $\times 10$ if possible.
- (iii) Paper or opaque plastic bag containing 50 dry beans, e.g. butter beans, labelled **S5**.
- (iv) Means of marking the beans, e.g. felt tip pen, permanent marker pen.
- (v) Ruler (mm).

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

REPORT ON PRACTICAL BIOLOGY

General Certificate of Education Ordinary Level

May/June Session 2010


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

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

 - 2 The Supervisor or teacher responsible for the subject is asked to carry out the tests for starch in Question 1 and record the observations below.

 - 3 Give details of beetle(s) provided as specimen **S4** e.g. species (if known), drawing, photo or description.

 - 4 Give details of any difficulties experienced by particular candidates, giving names and candidate numbers. Reference should be made to:
 - (a) difficulties arising from faulty specimens;
 - (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.
- Information that applies to all candidates need only be given once.

 Other cases of individual hardship, e.g. illness or disability, should be reported direct to CIE on the normal 'Special Consideration Form' as detailed in Part 6 of the Handbook for Centres.

- 5 A plan of work benches, giving details of the candidate numbers of the places occupied by the candidates for each session, must be enclosed with the scripts. The space below can be used for this, or it may be on separate paper.

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.

Signed

Name (in block capitals)

Centre number

Centre name

If scripts are required by CIE to be despatched in more than one envelope, it is essential that a copy of the relevant Supervisor's report and the appropriate seating plan(s) are sent inside **each envelope**.

