

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

BIOLOGY

5090/03

Paper 3 Practical Test

October/November 2006

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 **3** printed pages, **3** 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

Instructions to Supervisors

Each candidate requires:

For question 1

- (i) Specimen labelled **W1** – a freshly cut slice of a slightly **under-ripe** banana fruit, approximately 3 cm. thick. The banana should not be peeled.
- (ii) Specimen labelled **W2** – a slice of cucumber thick enough to contain at least **one visible seed**.
- (iii) White tile.
- (iv) Scalpel or sharp knife.
- (v) 2 test-tubes, in rack or similar means of support.
- (vi) Test-tube holder.
- (vii) Water bath, with heater.
- (viii) Supply of iodine solution, labelled and in suitable dispenser.
- (ix) Supply of Benedict's solution, labelled and in suitable dispenser.
- (x) Hand lens, x 10 preferably.
- (xi) Access to tap and sink.
- (xii) Sight of clock with second hand.

Additional material for question 2:

- (i) **Specimen W3** – two flowers, as large as possible, from the family *Bignoniaceae*, labelled **W3**. (e.g. *Catalpa*, *Jacaranda*, *Tabebuia*, *Campsis*, *Tecoma*, *Eccremocarpus* or similar)
(or one each, with some spares available)
If it is impossible to supply a flower from the family *Bignoniaceae* then an alternative tubular, zygomorphic flower could be supplied.
- (ii) **Specimen W4** – a panicle of any grass with some florets open, if possible, labelled **W4**.
(could be shared if necessary)
- (iii) Ruler (mm).
- (iv) Cleaned white tile from question 1.

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

REPORT ON PRACTICAL BIOLOGY

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

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

Identity of specimen **W3**.

Please draw the specimen as for question 2 (a)(i).

- 2 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.

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.



- 3 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**.

