

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS General Certificate of Education Ordinary Level

BIOLOGY 5090/32

Paper 3 Practical Test

October/November 2011

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 **5** printed pages and **3** blank pages.

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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. **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 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 in the left margin where relevant.

 \mathbf{C} = corrosive substance \mathbf{F} = highly flammable substance

H = harmful or irritating substance **O** = oxidising substance

T = toxic substance

Instructions to Supervisors

Each candidate must be supplied with:

For question 1

- (i) Piece of celery (the petiole), about 5 cm long, fresh and dry.
- (ii) Slice of Irish potato tuber, Solanum tuberosum, with no peel (skin), 2cm thick, 5cm or more in diameter.
- (iii) Scalpel or sharp knife.
- (iv) Forceps.
- (v) lodine in KI solution, with pipette dispenser, labelled 'lodine solution'.
- (vi) White tile.
- (vii) Paper towels.
- (viii) Access to tap and sink.
 - (ix) Hand lens.
 - (x) Ruler, mm.

For question 2

- Specimen labelled W1 white of hard-boiled egg (no yolk). Each candidate will require approximately 1 cm³
- (ii) Specimen labelled **W2** a piece of fresh or dried coconut flesh, approximately 1 cm³.
- (iii) Six test-tubes, in supporting rack, with means of labelling test-tubes.
- **[F][H]** (iv) Ethanol (industrial methylated spirit), 25–30 cm³, in test-tube, labelled 'Ethanol'.
 - (v) Biuret reagent, labelled and in form familiar to candidates.
 - (vi) Spatula.
 - (vii) Supply of distilled water, with pipette, labelled.
 - (viii) Scalpel or sharp knife (can be the one used in question 1, if washed).
 - (ix) Other apparatus from question 1.

Note: Ethanol is flammable, therefore no naked flames such as lighted Bunsen burners must be in the laboratory during the examination.

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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

October/November Session 2011

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

- **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.



candidat	of work benches, giving details of the candidate numbers of the places occultes for each session, must be enclosed with the scripts. The space below can it may be on separate paper.	
Declaration	(to be signed by the Principal)	
The preparat of the examir	tion of this practical examination has been carried out so as to maintain fully nation.	the security
	Signed	
	Oigrica	
	Name (in block capitals)	
	Centre number	
Centre name	e	
	e required by CIE to be despatched in more than one envelope, it is essential nt Supervisor's report and the appropriate seating plan(s) are sent inside each	

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