

# UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS General Certificate of Education Ordinary Level

BIOLOGY 5090/31

Paper 3 Practical Test

CONFIDENTIAL INSTRUCTIONS

1 hour 15 minutes

May/June 2010

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



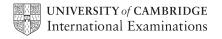
If you have any problems or queries regarding these Instructions, please contact CIE

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

© UCLES 2010 5090/31/CI/M/J/10

#### **Confidential Instructions**

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

#### **Question 1**

Each candidate will require:

- (i) Two 6cm 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) lodine 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 cm<sup>3</sup> dilute acid, each labelled S3.
- (xii) 2 beakers, 100 cm<sup>3</sup>.
- (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 ×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).

© UCLES 2010 5090/31/CI/M/J/10

6

## **BLANK PAGE**

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

University of Cambridge International Examinations is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of University of Cambridge Local Examinations Syndicate (UCLES), which is itself a department of the University of Cambridge.

© UCLES 2010

5090/31

# 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

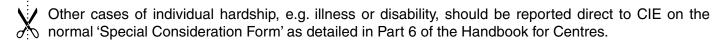
The Supervisor or Teacher responsible for the subject should provide the following information.

ı	was there any difficulty experienced in providing necessary material? It 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	s specimen	S4	e.g.	species	(if	known),	drawing,	photo	OI
	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.



8

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.
Dec	elaration (to be signed by the Principal)
	preparation of this practical examination has been carried out so as to maintain fully the security ne examination.
	Signed
	Signed
	Name (in block capitals)
	Centre number
Cer	tre name
lf sc	ripts are required by CIE to be despatched in more than one envelope, it is essential that a copy of
	relevant Supervisor's report and the appropriate seating plan(s) are sent inside <b>each envelope</b> .

X

© UCLES 2010 5090/31/CI/M/J/10