

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

**BIOLOGY** 5090/32

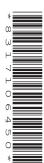
Paper 3 Practical Test

October/November 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.



#### 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

### **Confidential Instructions**

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

#### **Question 1**

Each candidate will require:

(i) Slices of (Irish) potato tuber, approximately 2–3 mm thick and without peel, sufficient for candidates to cut 6 strips of tissue 70 mm long by 10 mm wide.

The slices should be soaked in a solution of 8g sodium chloride per  $dm^3$  of solution, for  $1^{1/2}$  hours before the examination and must be presented to candidates in a suitable container, covered by the solution.

- (ii) Sharp knife or scalpel, to cut the potato.
- (iii) Three (half Petri) dishes, approx. 8–10 cm diameter, with means of labelling the dishes.
- (iv) Supplies of the following solutions of sodium chloride, approximately 75–100 cm<sup>3</sup> of each, in beakers, labelled with the letter indicated.

Solution **A** 75 g per dm<sup>3</sup>
Solution **B** 20 g per dm<sup>3</sup>
Solution **C** 3 g per dm<sup>3</sup>

The solutions should be made in bulk, and be of the concentrations stated.

- (v) Paper towel.
- (vi) Ruler, mm.
- (vii) Sight of clock.
- (viii) White tile.
  - (ix) Forceps.

### Question 2

## Each candidate will require:

- (i) A mosquito (adult), in a watch glass or other small container, in 40% ethanol (IMS), labelled X.
- (ii) Hand lens ( $\times$ 10 or  $\times$ 8, preferably).
- (iii) Microscope slide.
- (iv) Cover glass.
- (v) Ruler, mm (as provided for **Question 1**).
- (vi) Teat pipette.
- (vii) Forceps (as provided for Question 1).

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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 2010**

	The S	upervisor or	Teacher res	ponsible for	r the subj	ect should	provide the	following	g information
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1	Was any difficulty experienced in providing the 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 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.
Dec	claration (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	ntre name
	cripts 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