



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
International General Certificate of Secondary Education

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**BIOLOGY**

**0610/05**

Paper 5 Practical Test

**May/June 2009**

CONFIDENTIAL INSTRUCTIONS

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

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**READ THESE INSTRUCTIONS FIRST**

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

by email    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.

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This document consists of **6** printed pages and **2** blank pages.



**READ THESE INSTRUCTIONS FIRST**

These instructions give details of the apparatus, reagents and specimens required by each candidate for each experiment in this paper. A summary of the questions that will be presented to candidates is included, where appropriate, to allow the teacher to test the apparatus appropriately. **No access to the question paper is permitted in advance of the examination.**

It is assumed that the ordinary apparatus of a science laboratory will be available, including a supply of purified water (distilled or deionised).

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.**

**All specimens should carry only the code letters and numbers as indicated and their identity should not be revealed to the candidates.**

Supervisors should ensure that all specimens have the correct identity attached to the specimen and that these are **not** removed during the examination.

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.

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 where relevant

**C** = corrosive substance

**F** = highly flammable substance

**H** = harmful or irritating substance

**O** = oxidising substance

**T** = toxic substance

**Question 1**

Each student will need:

- (i) half of a fresh onion cut vertically, labelled **S1**

This specimen could be an onion set or similar small onion bulb approximately 3 cm or more in diameter prior to cutting. The outer brown papery scale leaves should be left present.

- (ii) a small fresh potato (*Solanum tuberosum*) cut end to end, labelled **S2**.  
**S1** and **S2** should be as fresh as possible, not previously dried or frozen.

- (iii) scalpel or similar blade to cut small pieces of specimens after drawing

- (iv) white tile or suitable cutting surface

- (v) pestle and mortar

- (vi) 4 long, large test-tubes

- (vii) labels or means of marking the tubes

- (viii) iodine in potassium iodide solution, labelled **iodine solution**, with a suitable dispenser

- (ix) Benedict's solution, labelled **Benedict's solution**, with dispenser

**Candidates have been asked to indicate when they are ready to start the reducing sugar test by raising their hands.**

- (x) a large container and a supply of hot water for reducing sugar test

- (xi) means of supporting the test-tubes in the hot water, e.g. wire test-tube holders

- (xii) stop-clock or view of a clock

**Question 2**

- (i) Stop-clock or view of a clock with a second hand (also used in Question 1).

Please notify the Product Manager for Biology at CIE well in advance of the examination to advise whether any candidate will be unable to take a pulse reading.

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

**REPORT ON PRACTICAL BIOLOGY**

**IGCSE**

**May/June Session 2009**

*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 and reducing sugar on **S1** and **S2**, as described in Question 1 and to record the observations in the table below:

test	observations	
	<b>S1</b>	<b>S2</b>
starch		
reducing sugar		

- 3 Variety of potato provided as **S2**.
- .....

- 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 inside **each envelope**.

