



**Cambridge International Examinations**  
Cambridge International General Certificate of Secondary Education

---

**BIOLOGY**

**0610/51**

Paper 5 Practical Test

**May/June 2014**

**CONFIDENTIAL INSTRUCTIONS**

**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 Confidential Instructions, please contact CIE

by email      [Info@cie.org.uk](mailto:Info@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 **6** printed pages and **2** blank pages.

**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. **Testing must be done out of sight of all candidates. No access to the question paper is permitted in advance of the examination.** Centres are reminded that candidates are expected to follow the instructions on the question paper and record all their results. They will not be penalised if these results are not what they expect.

The Supervisor should make sure the Supervisor's Report is fully completed and a copy is enclosed with each packet of scripts.

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

**N** = harmful to the environment

Centres are reminded that they are not permitted to open the question paper envelopes before the examination.

If there are any difficulties with any aspect of setting up this practical examination that the Centre is not able to resolve, it is essential for Centres to contact the Product Manager as soon as possible by **e-mail** to [info@cie.org.uk](mailto:info@cie.org.uk), by **fax** to +44 1223 553558 or by **phone** to +44 1223 553554.

**Confidential Instructions**

Each candidate should be provided with:

**Question 1**

- (i) eye protection e.g. safety spectacles
- (ii) 3 test-tubes plus 1 large test-tube supported in a test-tube rack
- (iii) means to label test-tubes (permanent/waterproof marker pen)
- (iv) 10 cm<sup>3</sup> of 1% starch in a small container, labelled **starch solution**  
To prepare 100 cm<sup>3</sup> of 1% starch solution, weigh out 1 g of starch powder, mix into a paste with cold water and make up to 100 cm<sup>3</sup> with boiling water, stirring constantly.
- (v) 10 cm<sup>3</sup> of 1% diastase, made up in distilled water, in a small container labelled **enzyme solution**  
To prepare 100 cm<sup>3</sup> of 1% diastase solution, weigh out 1 g of powdered diastase and add 100 cm<sup>3</sup> of cold distilled water.
- (vi) 1 5 cm<sup>3</sup> syringe (without needle)
- (vii) empty container, labelled **waste** and access to water for washing
- (viii) large beaker, suitable for supporting 3 test-tubes in hot water
- (ix) timer or view of a clock
- (x) 3 dropping (teat) pipettes
- (xi) white tile
- (xii) paper towels
- (xiii) dilute iodine solution in potassium iodide solution in a bottle with a dropping pipette labelled **iodine solution**  
This should be iodine in potassium iodide solution in a small container as used normally for starch tests.
- (xiv) 15 cm<sup>3</sup> of Benedict's solution in a bottle with dispenser labelled **Benedict's solution**
- (xv) hot water at least 80 °C  
Candidates have been instructed to raise their hands when they need hot water.

The Supervisor (**not** the Invigilator) is expected to carry out the practical aspects of Question 1 and record their results in the space provided in the Supervisor's Report. This must be done during the examination, using the same apparatus and reagents as the candidates but **out of sight of the candidates**.

**Question 2**

Each candidate should be provided with:

- (i) ruler with mm.

**BLANK PAGE**

**BLANK PAGE**

**This form should be completed and returned to CIE with the scripts.**

### **SUPERVISOR'S REPORT ON PRACTICAL BIOLOGY**

*The Supervisor should provide the following information.*

- 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 with specimens or materials;

.....

- (b)** accidents to apparatus or materials;

.....

- (c)** assistance provided in case of colour-blindness;

.....

- (d)** 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 the Handbook for Centres.

- 3** During the examination, the Supervisor should, **out of sight of the candidates**, carry out **Question 1**, using the same apparatus and reagents as the candidates. Results should be recorded in the space on page 8 (**not** on a spare Question paper).  
The Invigilator should **not** carry out **Question 1**.

Please record the room temperature .....

- 4 Enclose a plan of work benches with the scripts, giving details of the candidate numbers for the places occupied by the candidates for each session.

**Declaration** (to be signed by the Principal or the Examinations Officer)

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 to be dispatched in more than one packet, it is essential that a copy of the Supervisor's Report and the appropriate seating plan(s) are inside **each packet**.

---

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.

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.