

Cambridge  
**O Level**

**Cambridge International Examinations**  
Cambridge Ordinary Level

**BIOLOGY**

**5090/31**

Paper 3 Practical Test

**May/June 2015**

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](mailto: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.

## 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

**N** = harmful to the environment

Centres are reminded that they are **not** permitted to open the question paper envelopes before the examination. There are **no** exceptions to this. Centres are also referred to the Handbook for Centres which covers Security of Question Papers and Examination Materials and Practical Examinations in Science Subjects.

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.

**SUPERVISOR'S INSTRUCTIONS – CONFIDENTIAL**

Each candidate should be provided with:

**Question 1**

(i) Six bean seeds, previously soaked in water for 4 days in a cool place in a container (eg. petri dish), labelled **BEAN SEEDS** (runner beans, broad beans, dwarf (French) beans and mung beans are all suitable).

[H] (ii) Beaker containing approximately 25cm<sup>3</sup> of 10 volume (3%) hydrogen peroxide, labelled **HYDROGEN PEROXIDE**.

Hydrogen peroxide is HARMFUL and an oxidising agent. It should be kept away from naked flames.

(iii) Scalpel, knife or single-edged razor blade.

(iv) Rack containing 4 large test-tubes.

(v) Glass-writing pencil ('Chinagraph') or similar.

(vi) 10cm<sup>3</sup> plastic syringe, or pipette, for measuring 5cm<sup>3</sup> volumes.

(vii) White tile or similar.

[H] (viii) Dropper bottle containing iodine in potassium iodide solution (1%), labelled **IODINE SOLUTION**.

Iodine solution is HARMFUL.

(ix) Hand lens (preferably × 10).

(x) mm ruler.

(xi) Paper towels to clear up spills.

(xii) View of a clock or timer.

(xiii) Plastic gloves.

The Supervisor should carry out Question 1 on the day of the examination, out of view of the candidates and complete the section in the Supervisor's Report.



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

**SUPERVISOR'S REPORT**

**Cambridge Ordinary Level**

**May/June Session 2015**

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

- 1** Was any difficulty experienced in providing necessary material for Question 1?

.....

Room temperature during examination .....

Please record the following:

part of bean seed	observations
testa	
cotyledons	

Results of test for starch.

.....

.....

.....

- 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) any other information that is likely to assist the Examiner, especially if this cannot be discovered from the scripts.

Other cases of individual hardship eg. 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.

**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**.

