

Cambridge International Examinations

Cambridge Ordinary Level

BIOLOGY 5090/31

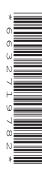
Paper 3 Practical Test

October/November 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

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.

CAMBRIDGE
International Examinations

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 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, by fax to +44 1223 553558 or by phone to +44 1223 553554.

SUPERVISOR'S INSTRUCTIONS - CONFIDENTIAL

Question 1

Each candidate to be provided with:

(i) 50 g of crushed fruit in each of two containers labelled W1 and W2

The fruit can be prepared in bulk by blender, mixing 100 g of fresh fruit (after any skin and stones have been removed) with 50 cm³ of water. This can be done using pestle and mortar if a blender is not available.

The fruit used could be plums, melons, tomatoes. Do not use apples or pears as some varieties do not yield significant volumes of juice.

(ii) Test-tube containing 5 cm³ of 2% pectinase or pectolase, labelled **enzyme**

This needs to be freshly prepared just before the start of the examination.

- (iii) Test-tube containing 5 cm³ of water, labelled water
- (iv) Two coffee filter papers
- (v) Two beakers to hold the filter papers to collect the juice, labelled 1 and 2
- (vi) Two measuring cylinders or syringes (with plunger) to measure up to 25 cm³
- (vii) Small container of water, labelled 'washing water'
- (viii) Container, labelled 'waste'
- (ix) Paper towels
- (x) View of a clock
- (xi) Two plastic spoons to stir the mixture and place crushed fruit into filter.

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 candidates.

Question 2

Each candidate to be provided with:

(i) Ruler (mm).

4

BLANK PAGE

5

BLANK PAGE

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.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge International Examinations Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at www.cie.org.uk after the live examination series.

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.

5090/31

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

SUPERVISOR'S REPORT

Cambridge Ordinary Level

October/November Session 2015

The S	unarvicar	or topohor	responsible	for the	cubioat	chould	provido	tha fall	owina i	nform	ation
THE SI	ubervisor	or teacher	responsible	ior trie	subject	sriouia	provide	trie ioik	owina i	THOTTH	auon

1	Was any difficulty experier	as any difficulty experienced in providing necessary materials? If so, give brief details.						
2	Give details of any difficul numbers. Reference should	ties experienced by particular cod be made to:	andidates, giving names and ca	ındidate				
	(a) difficulties with specin	nens or materials						
	(b) accidents to apparatu	s or materials						
	(c) any other information discovered from the s	n that is likely to assist the E cripts.	Examiner, especially if this car	nnot be				
		nardship, e.g. illness or disability, tion Form' as detailed in the Har		E on the				
3	Question 1 using the sa	the Supervisor should, out of ame apparatus and reagents a ow (not on a spare Question Par	as the candidates. Results sh	ould be				
	Fruit used for question 1							
	sample of juice	volume/cm ³	appearance					
	W1							
		1						



W2

4 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 or the Examinations Officer)
The preparation of this 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
relevant Supervisor's Report and the appropriate seating plan(s) are sent inside each packet.

X

© UCLES 2015 5090/31/CI/O/N/15