

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Ordinary Level

**BIOLOGY**

**5090/03**

Paper 3 Practical Test

October/November 2004

**1 hour 15 minutes**

**CONFIDENTIAL INSTRUCTIONS**

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

**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

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

by e-mail: [International@ucles.org.uk](mailto:International@ucles.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.

**Instructions to Supervisors**

Each candidate must be supplied with:

**For question 1**

Approximately 20 cm<sup>3</sup> of each of the 4 solutions labelled by the identifying letter only.

- A** approximately 5 g of dried albumen or the white of a fresh egg, dissolved in 1 dm<sup>3</sup> of solution. This should be checked to ensure that a positive result is given with the biuret reagent(s) supplied.
- B** approximately 10 g glucose in 1 dm<sup>3</sup> of solution.
- C** water.
- D** a few drops of liquid soap added to water – sufficient to cause sulphur powder to sink when placed on the surface, please check that it does.

Tap water may be used for all of the solutions.

Each of the solutions should be *very faintly* discoloured by the addition of, for example, a trace of Bovril or Marmite or tea.

A small amount, approximately 1 g, of powdered sulphur, on a piece of paper, e.g. filter paper, labelled 'sulphur'.

6 test-tubes.

A means of labelling test-tubes.

A test-tube rack.

A test-tube holder.

A waterbath and heater.

A spatula or wooden splint.

Benedict's solution, labelled as such and with a means of dispensing small amounts.

Biuret reagent(s), labelled as such and with a means of dispensing small amounts.

Access to tap and sink.

Sight of clock.

Paper towels.

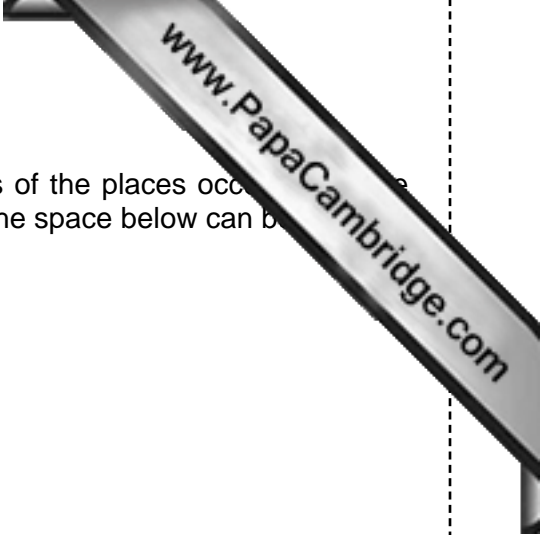
**For question 2**

**Specimen P** A prawn which may be either fresh, or of the type sold 'complete and ready cooked' in a (super)market, provided that the specimens are reasonably complete with legs, eyes, antennae and tail.

A hand lens.

A ruler (mm).





- 3 A plan of work benches, giving details of the candidate numbers of the places occupied by 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 sent inside **each envelope**.

