

**International General Certificate of Secondary Education
CAMBRIDGE INTERNATIONAL EXAMINATIONS**

BIOLOGY

0610/5

PAPER 5 Practical Test

CONFIDENTIAL INSTRUCTIONS

OCTOBER/NOVEMBER SESSION 2002

1 hour

Great care should be taken to ensure 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.

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.**

If you have any problems or queries regarding these Instructions, please contact CIE
by e-mail: 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.

These instructions consist of 2 printed pages.



Question 1

Each candidate will require:

- (i) a potato tuber with obvious buds, labelled **specimen X**. The candidate will be required to cut the potato tuber in half and obtain a slice 4 cm x 1 cm x 1 cm from each half;
- (ii) a white tile, or similar, on which the potato may be cut and examined;
- (iii) a scalpel;
- (iv) safety glasses/eye protectors;
- (v) two boiling tubes and a means of supporting them;
- (vi) a beaker (250 cm³ or larger) half full of water;
- (vii) a 10 cm³ or 25 cm³ measuring cylinder or small graduated beaker;
- (viii) a means of measuring 5 cm³ volumes of solution **Y** e.g. a 5 cm³ or 10 cm³ syringe;
- (ix) a mm ruler;
- (x) a marker pen or means of marking glass;
- (xi) a stopclock or sight of a clock with a seconds hand;
- (xii) a hand lens;
- (xiii) a 100 cm³ beaker containing 30 cm³ of 5% hydrogen peroxide solution, labelled **solution Y**;
- (xiv) paper towelling;
- (xv) access to a tap or running water.

Solution Y must be freshly prepared on the day of the examination.

Solution **Y**: 5% hydrogen peroxide solution

This is best prepared from a 50 vols. solution by diluting the solution with water e.g.
per three candidates: 5 cm³ 50 vols hydrogen peroxide solution diluted with 95 cm³ water.

Hydrogen peroxide is corrosive. Candidates must only be given the diluted solution. Any spills must be dealt with immediately and recorded on the Supervisors Report.

Question 2

Each candidate will require:

- (i) a mirror (about 10 cm x 10 cm);
- (ii) a ruler in cm and mm.

Safety

Teachers are expected to instruct candidates to take such precautions as are laid down or advised by their Education Authority/School or College.