www.XtremePapers.com

CAMBRIDGE INTERNATIONAL EXAMINATIONS

General Certificate of Education Advanced Level

BIOLOGY 9700/5

PAPER 5 Practical Test

CONFIDENTIAL INSTRUCTIONS

OCTOBER/NOVEMBER SESSION 2002

1 hour 30 minutes

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.

Candidates must be provided with a microscope with low power and high power objectives (e.g. $\frac{2}{3}$in and $\frac{1}{6}$in). Each candidate must have the sole use of a microscope for 40 minutes. As Question 1 requires the use of a microscope, some candidates should be instructed to answer Question 2 first.

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,
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 3 printed pages and 1 blank page.

© CIE 2002

[Turn over

Each candidate must also be provided with the following apparatus and materials.

To be supplied by the Centre

Question 1

(i) Slide **K1** (from Cambridge).

Question 2

Candidates will be required to carry out an experiment to find the effect of pea plumules on hydrogen peroxide.

(i) Three pea seedlings, labelled **S4**.
The peas should be germinated in advance to ensure that each seedling has a shoot growth of about 2 cm. The peas can be germinated by soaking for five hours in water and placing them on damp cotton wool. The time taken for germination will vary depending upon local conditions, and should be tried out well in advance of the examination.

(ii) A small beaker.

(iii) A Bunsen burner or some other source of flame.

(iv) A glass rod.

[H] (v) 25 cm^3 of 20 volumes hydrogen peroxide, labelled **S5**.

(vi) A glass marker pen for labelling test-tubes.

(vii) A 10 cm^3 or 25 cm^3 measuring cylinder.

(viii) A scalpel or a sharp knife.

(ix) Test-tubes ($\times$4) and a test-tube rack.

(x) A tripod and gauze.

(xi) A water source, including distilled water.

(xii) A white tile.

(xiii) A spatula.

(xiv) A small quantity of washed, salt-free sand for macerating the seedlings. (Candidates will need to use four spatulas full.)

(xv) Paper towelling.

To be supplied by Cambridge

(i) Answer books, which also contain the questions.

(ii) Slide **K1** (Question 1 and shared between two candidates).

RETURN OF EXAMINATION MATERIALS TO CAMBRIDGE

Please read the following instructions carefully.

Immediately after the examination, the slides must be returned to Cambridge in the containers in which they were received, using the self-adhesive label for the parcel; they must not be included in parcels of scripts. On occasion, it may be possible to offer certain slides or materials, used in the examination, for sale to Centres. In this case, an Order Form will be enclosed with the materials sent from Cambridge for the examination. Slides and containers not returned in good condition will be charged at the rate of £3 per item.

REPORT FORM

In order to minimise the disadvantages of a practical examination at which the Examiner is not present, the teacher responsible for the examination is asked to complete the Report Form on the back cover of the script of the candidate whose name appears first on the attendance register. Further comments by teachers need only be made on those scripts where difficulties are encountered.

BLANK PAGE