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CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education
Advanced Subsidiary Level and Advanced Level

BIOLOGY **9700/03**

Paper 3 Practical Test AS

October/November 2003

CONFIDENTIAL INSTRUCTIONS

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 30 minutes.

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.

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

To be supplied by the Centre

Question 1

Each candidate will require:

(i) A small tomato or piece of tomato, labelled **S1**, 2 or 3 grapes or similar soft **sweet** fruit labelled **S2**, and a piece of yellow grapefruit or similar citrus fruit, labelled **S3**, (sufficient to provide 1 cm^3 of juice from each fruit). If alternative fruits are used, please state the name of the fruit(s) used on the back of the first script used.

(ii) 10 or 15 cm^3 of 5% solution of glucose (by mass), labelled **S4**.

(iii) 20 cm^3 Benedict's solution.

(iv) Two 1 cm^3 syringes graduated with at least 0.5 cm^3 intervals.

(v) Pestle and mortar or other suitable means to crush fruit.

(vi) Test-tube rack with eight test-tubes.

(vii) Water-bath or means of heating water e.g. beaker, Bunsen, tripod and gauze.

(viii) A stopclock or stopwatch or sight of a clock with a second hand.

(ix) Distilled water.

(x) Wax pencil or other means of marking test tubes.

(xi) A thermometer, –10 °C to +110 °C at 1 °C.

(xii) Small (100 cm^3 approximately) beaker or container.

(xiii) Access to a means of washing syringes and pestle and mortar.

(xiv) Test tube holder.

The teacher present in the examination room at the start of the test should carry out question 1(a) and enter their results on a spare copy of the examination paper, clearly marked 'Teacher's Results' and showing the Centre Number. This should be returned with the scripts.

Question 2

Each candidate will require:

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

To be supplied by Cambridge

(i) Answer book, which also contains the questions.

(ii) Slide **K1** (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 Syndicate Buildings 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 for the Syndicate 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.

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