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CAMBRIDGE INTERNATIONAL EXAMINATIONS

General Certificate of Education Advanced Subsidiary Level and Advanced Level

BIOLOGY 9700/3

PAPER 3 Practical Test

OCTOBER/NOVEMBER SESSION 2002

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.

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.

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 2 printed pages.

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Local Examinations Syndicate

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

To be supplied by the Centre

Question 1

(i) Ten sticks of skinless potato tissue.
The sticks should be cut from a fresh potato and be approximately 5 mm square and exactly 50 mm in length. Once cut, two sticks should be placed in five boiling tubes (or suitable containers), each containing the following solutions of sucrose.

0.0 mol dm^{-3} (distilled water) 0.25 mol dm^{-3} 0.5 mol dm^{-3} 0.75 mol dm^{-3} 1.0 mol dm^{-3}

The boiling tubes should be labelled 0.0 mol dm^{-3}, 0.25 mol dm^{-3}, 0.5 mol dm^{-3}, 0.75 mol dm^{-3}, and 1.0 mol dm^{-3}, respectively.

Care should be taken to ensure that the potato sticks are completely submerged.
The sticks should be left in the solution for at least 3 hours but no more than 24 hours.

(ii) A pair of forceps.

(iii) Paper towels for blotting dry the potato sticks.

(iv) A ruler measuring in mm.

(v) A white tile or similar.

To be supplied by Cambridge

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

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.