

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

AGRICULTURE

5038/03

Paper 3 Practical Test

October/November 2006

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.

READ THESE INSTRUCTIONS FIRST

These instructions give details of the apparatus reagents and specimens required by each candidate for each experiment in this paper. A summary of the questions that will be presented to candidates is included, where appropriate, to allow the teacher to test the apparatus appropriately. **No access to the question paper is permitted in advance of the examination.**

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.**

All specimens should carry only the code letters and numbers as indicated and their identity should not be revealed to the candidates.

Supervisors should ensure that all specimens have the correct identity attached to the specimen and that these are **not** removed during the examination.

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 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@cie.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.

This document consists of 2 printed pages.

All specimens/materials should carry only the letters/numbers as indicated and their identity should not be revealed to candidates.

Supervisors should ensure that all specimens have the correct identity attached to the specimen and that these are not removed or altered during the examination.

Specimens and apparatus should be provided as follows.

Question 1

Each candidate should have access to:

- deionised water labelled **AS1** (approx 20 ml/candidate);
- a source of 1M hydrochloric acid labelled **AS2** (approx 20 ml/candidate. The sample should turn Universal Indicator orange/red;
- a source of 0.01M hydrochloric acid labelled **AS3** (approx 20 ml/candidate). The sample should turn Universal Indicator yellow;
- Universal Indicator solution or Universal Indicator paper. Whichever is used should be stated on the Supervisor's report;
- three clean test tubes;

Question 2

- a piece of thin card larger than 100 mm x 160 mm;
- scissors
- 300 mm ruler;
- 200 mm adhesive tape;
- a pin;
- a retort stand;
- a plumb line of between 150 mm and 250 mm, labelled **plumb line**.

Question 3

- a mixture of albumin (or any other soluble protein) and starch in a ratio of 1:10 labelled **AS4**. Each Candidate will require approx. 3 spatulae of the mixture;
- iodine solution labelled **iodine solution** (approx 1 ml/candidate);
- Benedict's solution labelled **Benedict's solution** (approx 5 ml/candidate);
- 1M sodium hydroxide solution labelled **sodium hydroxide** (approx 5 ml/candidate);
- 1M copper sulphate solution labelled **copper sulphate** (approx 5 ml/candidate);
- three clean test tubes;
- a source of heat for warming the test tubes.

The supervisor's report is to be filled in on the back page of the first candidates's script. Please ensure that this is done.