

UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Ordinary Level

**AGRICULTURE**

**5038/03**

Paper 3 Practical Test

CONFIDENTIAL INSTRUCTIONS

May/June 2005

**1 hour 15 minutes**

**Great care should be taken 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, reagents and specimens 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 teacher to test the apparatus appropriately. **No access to the question paper is permitted in advance of the examination session.**

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.

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 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](mailto: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.

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

Supervisors should ensure that all specimens have the correct identity attached to the specimens 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:
- a 1% solution of pepsin labelled **AS1**;
  - a freshly made suspension of albumen or other suitable protein which has been boiled and allowed to cool and then sieved or filtered to remove any lumps, but appears white/cloudy. This suspension should be labelled **AS2**;
  - 5 clean test-tubes;
  - a test-tube rack;
- [C]
- 1 mol dm<sup>-3</sup> (= 1M) sodium hydroxide solution labelled **sodium hydroxide** and a dropping pipette which can be used specifically for sodium hydroxide;
  - 1 mol dm<sup>-3</sup> (= 1M) hydrochloric acid labelled **hydrochloric acid** and a dropping pipette which can be used specifically for hydrochloric acid;
  - deionised (or distilled) water labelled **deionised water** and a dropping pipette which can be used specifically for deionised water;
- [H]
- universal indicator solution labelled **universal indicator** solution;
  - a method of labelling test-tubes e.g. chinagraph pencil;
  - sight of a clock or watch.

Question 2 Specimens **AS3** and **AS4**, labelled by those codes only.

- **AS3** – a dicotyledonous weed with leaves, obvious flowers and hooked fruits (e.g. *Bidens* spp.);
- **AS4** – a grass plant which is recognised locally as a weed.

**Details of the chosen species to be given in Supervisor's report.**

- Question 3 Each candidate should have:
- **AS5** which is a sandy soil containing small stones labelled **AS5**;
  - **AS6** which is a more loamy soil. It may be necessary to mix some clay and/or organic material into a sandy soil if there is no loamy soil available locally. The soil should be labelled **AS6**;
  - a supply of water.

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