



UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
General Certificate of Education Ordinary Level

**AGRICULTURE**

**5038/03**

Paper 3 Practical Test

**May/June 2008**

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.

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@cie.org.uk](mailto: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 the 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.

- 1 Each candidate should be provided with clearly labelled samples.
  - **AS1** a sample of soil made by mixing 20 cm<sup>3</sup> coarse sand, 20 cm<sup>3</sup> fine sand, 20 cm<sup>3</sup> clay/silt and a trace of humus.
  - **AS2** a sample made by mixing 30 cm<sup>3</sup> clay or silt 10 cm<sup>3</sup> sand, 20 cm<sup>3</sup> peat.

**AS1** should feel sharp and gritty **AS2** soft and spongy.

Please pre test a sample by placing 2 cm<sup>3</sup> of **AS1** in a boiling tube filling the boiling tube to within 0.5 cm<sup>3</sup> from the top of the tube. Shake and allow to settle. Repeat for **AS2**. After allowing 5 minutes to settle **AS1** must have less than 0.4 cm<sup>3</sup> of floating humus, and **AS2** at least 1 cm<sup>3</sup> of floating humus. The sample could be made en mass allowing at least 60 cm<sup>3</sup> for each.

Each candidate will need:

- a mat or white tile
- 2 boiling tubes and rack or tube stand
- a marker pen
- 2 corks or bungs to fit the boiling tubes
- access to tap water
- rule with mm scale

- 2 Each candidate will need
  - **AS3** a large dry bean seed
  - **AS4** a bean seed of the same species which has been soaked in water for 24 to 48 hours and presented in a container of water

NB. The bean species – common and Latin names to be noted on the Supervisor's report

Each candidate will need access to

- a mat or tile
- a scalpel and forceps
- iodine solution in dropping bottle labelled iodine solution
- hand lens
- spatula

- 3 Candidates need access to a clean sparking plug for at least 5 minutes labelled **AS5**.