



EXAMINATIONS COUNCIL OF SWAZILAND  
in collaboration with  
UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS  
Swaziland General Certificate of Secondary Education

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**BIOLOGY**

**6884/04**

Paper 4 Practical Test

**October/November 2012**

CONFIDENTIAL INSTRUCTIONS

**Great care should be taken that any confidential information given does not reach the candidates either directly or indirectly.**

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This document consists of **5** printed pages and **3** blank pages.

### 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 who is the supervisor 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.

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**.

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.

**C** = corrosive substance

**F** = highly flammable substance

**H** = harmful or irritating substance

**O** = oxidising substance

**T** = toxic substance

**Question 1**

Each candidate to be provided with the following apparatus and materials:

1. 10g white sugar in a suitable container, labelled '**sugar**'.
2. 5g instant yeast in a suitable container, labelled '**yeast**'.
3. 20g white bread flour (**NOT** self-raising flour) in a suitable container, labelled '**flour**'.
4. Laboratory thermometer.
5. 50 cm<sup>3</sup> of warm water ranging between **30 °C** and **40 °C** in a 250 cm<sup>3</sup> beaker.

**NOTE:** Ensure that the temperature is at this range at the start of the experiment.

6. Spatula, teaspoon or stirring implement made out of any rigid material for mixing the ingredients.
7. A stop clock or sight of a wall clock.
8. A ruler with mm divisions.

**Question 2**

Each candidate to be provided with the following apparatus and materials:

1. About 2 cm length of the trachea from a chicken, placed in a petri-dish labelled **W1**.
2. About 2 cm length of the **small intestine** (ileum) from a chicken in a petri-dish labelled **W2**.
3. A hand lens.
4. Iodine solution labelled "**iodine solution**" in a suitable container with a dropper.





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**This form must be completed and returned in the envelope with the scripts together with the seating plan and a copy of the ‘Supervisor’s Results’.**

**REPORT ON PRACTICAL BIOLOGY**

**October/November Session 2012**

- 1** The Supervisor is invited to give details of any difficulties experienced by particular candidates, giving their names and candidate numbers.

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- 2** Was there any difficulty experienced in providing the necessary materials? If so give brief details.
- (a)** Difficulties due to faulty apparatus;
  - (b)** Accidents to apparatus or materials;
  - (c)** Physical handicaps, e.g. short sight, colour blindness;
  - (d)** Any other information that is likely to assist the Examiner, especially if this cannot be discovered in the scripts;
  - (e)** Any help given to a candidate.

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*The Supervisor is asked to supply the following information:*

Plan of work benches, giving details by candidate numbers of the places occupied by the candidates for each session and a copy of the 'Supervisor's Results'.

NAME OF CENTRE .....

SIGNED .....  
**Invigilator**

SIGNED .....  
**Supervisor**

CENTRE NUMBER .....

DECLARATION (to be signed by the Principal)

The preparation of this examination has been carried out so as to maintain fully the security of the examination.

NAME .....  
(in block capitals)

SIGNED ..... (Principal)