



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

PHYSICAL SCIENCE

6888/03

Paper 3 Practical Test

October/November 2019

CONFIDENTIAL INSTRUCTIONS

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

The Supervisor's attention is drawn to the form on page 4 which must be completed and returned with the scripts

This document consists of **4** printed pages.

Question 1

Each candidate will require:

- (i) 3 × 5 cm long strips of magnesium ribbon, labelled **R**
- (ii) 1 × 5 cm long strips of copper foil, about 3 mm thick, labelled **S**
- (iii) 2 x iron nails (2 inches)
- (iv) 20 cm³ × 1 M copper(II) sulfate solution labelled as such,
- (v) 10 cm³ × 1 M hydrochloric acid, labelled as such,
- (vi) access to 1 M sodium hydroxide labelled as such,
- (vii) 2 strips of Universal indicator paper
- (viii) a full pH chart (0–14)
- (ix) access to pipette droppers
- (x) pair of forceps or tongs
- (xi) 1 × test-tube rack
- (xii) 8 × test-tubes
- (xiii) 1 × tile or Petri-dish
- (xiv) 1 × crucible
- (xv) 2 × 10 cm³ measuring cylinders
- (xvi) 10 labelling stickers
- (xvii) safety goggles
- (xviii) gloves
- (xviii) access to a Bunsen burner
- (xix) access to water
- (xx) access to a clock

NB: magnesium ribbon should be freshly polished using fine sand paper or steel wool, preferably on the day of the practical.
Test if all the apparatus and equipment are working properly before the examination.

For Question 2

Each candidate will require:

- (i) 3 × cells
- (ii) 2 × core (5 inch iron nail)
- (iii) 1 × circuit board/cell holders/battery holders
- (iv) 2 × connecting wires, each with crocodile clips on both ends
- (v) 1 × insulated copper wire ($\phi = 2.053 \text{ mm}$)
- (vi) 1 × switch
- (vii) 10 × 33mm paper clips per candidate
- (viii) 1 × permanent bar magnet
- (ix) 1 × retort stand with boss and clamp

Note: For each candidate:

- Supervisor must make 30 turns on one nail, 60 turns on the other nail.
- Connect a circuit using the 30 turns on the nail as shown in **Fig. 2.1**.

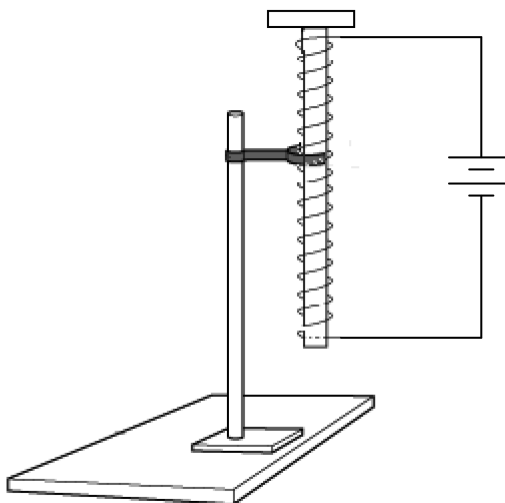


Fig. 2.1

The supervisor is asked to carry out the experiments and to enter their results on a spare copy of the examination paper, clearly marked 'Supervisor's Results'. This should be returned with the scripts. Failure to do so may cause the candidates to be penalised.

This form must be completed and returned in the envelope with the scripts together with the seating plan and the Supervisor's results.

General

The supervisor is invited to give details of any difficulties experienced by particular candidates, giving their names and candidate numbers. These should include reference to:

- (a) difficulties due to faulty apparatus;
- (b) accidents to apparatus or materials;
- (c) physical disabilities, 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 number of the places occupied by the candidates for each session and a copy of the 'Supervisor's Results'.

NAME OF CENTRE

CENTRE NUMBER

NAME(S) OF SUPERVISOR(S)

.....

DECLARATION (to be signed by the Head of Centre)

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

NAME
(in block letters)

SIGNED (Head of Centre)

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