



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini General Certificate of Secondary Education

PHYSICAL SCIENCE

6888/04

PAPER 4 Practical Test

October/November 2019

Confidential

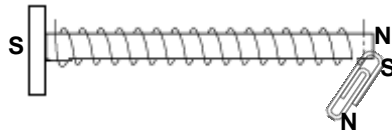
MARK SCHEME

{6888/04}

MARKS: 40

- 1 (a) magnesium: grey/shiny; [1]
copper: brown/shiny; [1]
- (b) (i) magnesium: brown solid; [1]
iron nail: brown solid; [1]
(ii) magnesium: more bubbles formed; [1]
copper: no change; [1]
iron nail: less bubbles formed; [1]
(iii) magnesium; \longrightarrow iron \longrightarrow copper; [2]
- (c) (i) brilliant flame; [1]
white solid; [1]
(ii) dip paper into solution; [1]
match colour formed with colour in the pH chart; [1]
(iii) pH: 10 and above; above [1]
(iv) basic oxide; [1]
- (d) pour solution in named heating vessel; [1]
heat to evaporate the water/ leave solution to dry; [1]
- (e) filter funnel, filter paper, collecting vessel; [1]
apparatus correctly assembled; [1]
two labels; [1]
Award full marks for decanting.
- (f) avoid contact with skin by wearing gloves, lab coats, goggles, etc. [1]

- 2 (a) (i) paper clip is attracted; [1]
 (ii) correct polarity of paper clip; [1]
 correct polarity of electromagnet; [1]



- (b) (i) the first paper clip has gained (induced) magnetism; [1]
 (ii) magnetism is weakened; [1]
 further away from the electromagnet; [1]
 (iii) some paper clips will drop; [1]
 magnetism reduced; [1]
- (c) (i) four and above; [1]
 (ii) increasing the number of cells increases the number of paper clips attracted; [1]
 more cells increase the strength of the electromagnet; [1]
- (d) (i) more than value (c)(i); [1]
 (ii) increasing the number of turns increases the number of paper clips attracted; [1]
 more turns increase the strength of the magnet; [1]
- (e) use new cells for each measurement/ switch off between measurements/ use variable power supply instead of cells/ repeat and average the results; [1]
- (f) use of iron filings or plotting compass; [1]
 place a piece of paper on the electromagnet; [1]
 sprinkle iron filings over the paper and tap (gently) the piece of paper to form lines/
 place compass on piece of paper and mark the direction to which it is pointing; [1]
- (g) aluminium is a non-magnetic material; [1]