



EXAMINATIONS COUNCIL OF SWAZILAND  
Swaziland General Certificate of Secondary Education

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**PHYSICAL SCIENCE**

**6888/03**

Paper 3 Practical Test

**October/November 2018**

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***Confidential***

***MARK SCHEME***

***{6888/03}***

***MARKS: 40***

- 1 (a) filtration; [1]
- (b) (i) white; [1]  
precipitate; [1]  
(ii) chloride ion; [1]
- (c) (i) universal indicator changes (from yellow) to blue / purple / mauve / violet; [1]  
(ii) 9 to 14; [1]  
(iii) match colour to pH chart; [1]  
read value from the pH chart; [1]  
(iv) ammonia gas /  $\text{NH}_3$ ; [1]  
(v) universal indicator shows alkalinity and the pH value; [1]  
while litmus paper indicates alkalinity only; [1]  
(vi) to avoid contamination; [1]
- (d) (i) observation: bubbles produced / effervescence / hissing sound; [1]  
explanation: gas is produced; [1]  
(ii) increase the concentration of acid / heating / add a catalyst; [1]  
  
(iii) avoid skin contact / wear goggles / wear protective clothing; [1]
- (e) (i) white precipitate formed; [1]  
(ii) precipitate does not dissolve; [1]  
(iii) calcium ion; /  $\text{Ca}^{2+}$  [1]
- (f) calcium carbonate; [1]
- 2 (a) (i) student's temperature value below  $80\text{ }^{\circ}\text{C}$ ; [1]  
(ii) temperature less than reading in (a) (i); [1]  
decreasing values of temperature; [1]  
same number of significant figures; [1]
- (b) (ii) value of temperature at  $t = 300\text{ s}$  in flask **B** more than in flask **A**; [1]
- (c)  $^{\circ}\text{C}$ ; [1]
- (d) (i) suitable scale; [1]  
at least four points correctly plotted; [1]  
line of best fit; [1]  
(ii) at least four points correctly plotted; [1]  
both lines labelled; [1]

- (e) (i) method shown; [1]  
correct value; [1]  
(ii) gradients negative; [1]
- (f) B, has less heat loss per second; [1]
- (g) minimises / reduces heat loss; [1]
- (h) (i) equal drop in temperature; [1]  
for every second; [1]  
(ii) volume of water (same);  
same thickness of glass;  
same initial temperature;

[max 2] [2]