

Student's Name:

Signature:

545/2
CHEMISTRY
(PRACTICAL)
Paper 2
November, 2023
2 hours.

ABDUL-RAHMAN BUN AUF ISLAMIC INSTITUTE NAMAGOMA
CHEMISTRY DEPARTMENT EXAMINATIONS BOARD
CHEMISTRY PRACTICAL
2 Hours

INSTRUCTIONS:

Attempt **all** the questions. Your answers **must** be written in the answer sheet(s) and graph paper(s) provided.

All working **must** be clearly shown in **blue** or **black** ink.

Mathematical tables and silent non-programmable scientific calculators may be used.

For Examiners' Use Only									
Question 1	a	b	c	d	e	f	g	h	Total
Max marks	1	3	1	1	7	5	10	2	30
Actual marks									

QUESTION 1.

In this experiment you will investigate the rate of reaction between sodium thiosulphate and dilute hydrochloric acid at different temperatures.

You are provided with the following;

- **BA1** which is 0.07M sodium thiosulphate (155cm^3)
- **BA2** which is 2M hydrochloric acid (30cm^3)
- All other apparatus required for the investigation

Carryout your own investigation at room temperature, 35°C , 45°C , 55°C , and 65°C of hydrochloric acid and write a brief report about your findings. Your report should include the following:

- Aim of the experiment.
- Variables of the experiment.
- Hypothesis.
- List of apparatus and materials used.
- Procedure of the experiment.
- Tabulation of data.
- (i) A graph of time against temperature of hydrochloric acid.
(ii) A graph of $\frac{1}{t}$ against temperature of hydrochloric acid.
- Conclusion from the investigation.

QUESTION 2.

In this experiment you will investigate the rate of reaction between dilute hydrochloric acid and magnesium ribbon at different temperatures.

You are provided with the following;

- **FA1** which is 2M hydrochloric acid (160cm^3)
- Substance **G** which is magnesium ribbon (9cm long)
- All other apparatus required for the investigation.

Carryout your own investigation at room temperature, 35°C , 45°C , 55°C , 65°C and 75°C of hydrochloric acid and write a brief report about your findings. Your report should include the following:

- Aim of the experiment.
- Variables of the experiment.
- Hypothesis.
- List of apparatus and materials used.
- Procedure of the experiment.

- f. Tabulation of data.
- g. A graph of $\frac{1}{t}$ against temperature of hydrochloric acid.
- h. Gradient / slope of your graph plotted in (g) above and indicate its units.