CANDIDATE NAME: _____

HILLCRESCENT PVT SECONDARY SCHOOL

2021 MALAWI SCHOOL CERTIFICATE OF EDUCATION

MOCK EXAMINATION

CHEMISTRY

Subject Number: M038/II

Monday, 04th October, 2021 **Time allowed: 2hr sessions**

PAPER II

(40 Marks)

Instructions

1. This paper contains **4** printed pages. **Please check.**
2. There are four questions in this paper please check
3. Marks are indicated against each question.
4. This paper contains two sections A and B
5. Section A contains two descriptive questions on practical work to be answered in 1 hour.
6. In Section B there are two practical questions to answered in 1 hour.
7. Write your **Name / Examination Number** on top of each answer sheet you have used.
8. In the table provided to the right of this page tick against the question you have answered.

Question Number	Tick if answered	Do not write in these columns	
1			
2			
3			
4			

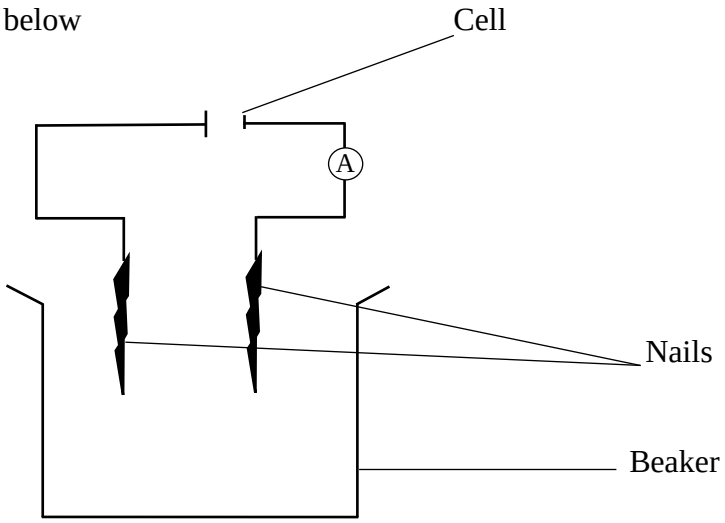
SECTION A (20 Marks)

1. Describe and experiment that could be done to find the concentration of HCl using 0.1M of NaOH by titration.

2. Construct a flow diagram that could be used to identify ethanol, propane, acetic acid, ethanal and hexane, using tests that make use of distilled water, sodium hydroxide solution, phenolphthalein, Brady's solution and Tollens reagent.

3. You are provided with a cell, and ammeter, a beaker, 2 iron nails, 3 connecting wires and 50mls of different solutions labelled A, B, C, D and E.

a) Set up the apparatus as shown below



b) Pour 50mls of liquid A into the beaker

c) Dip the nails into the liquid

d) Take note of the ammeter reading and record "current" or "no current" in the table of results below.

e) Remove the nails from the beaker

f) Rinse the beaker and nails with distilled water

g) Repeat steps b to f using solutions B, C, D and E

SOLUTION	RESULTS

h) Classify the solutions as ionic or covalent

Ionic_____

Covalent_____

(5 marks)

4. You are provided with 0.1M, 0.2M, 0.3M and0.4M sodium thiosulphate ($CNa_2S_2O_3$) solutions, a blacle cross (X) on white paper, 0.5M hydrochloric acid (HCl), a beaker, a stop watch and two measuring cylinders.

a) Pour $10cm^3$ of 0.5M hydrochloric acid in the beaker and shake the beaker gently.

b) Place the beaker on the white paper with a black cross

c) Add $2cm^3$ of 0.5M hydrochloric acid in the beaker and shake the beaker gently.

d) Record the time taken for the black cross to completely disappear form sight in the table of results.

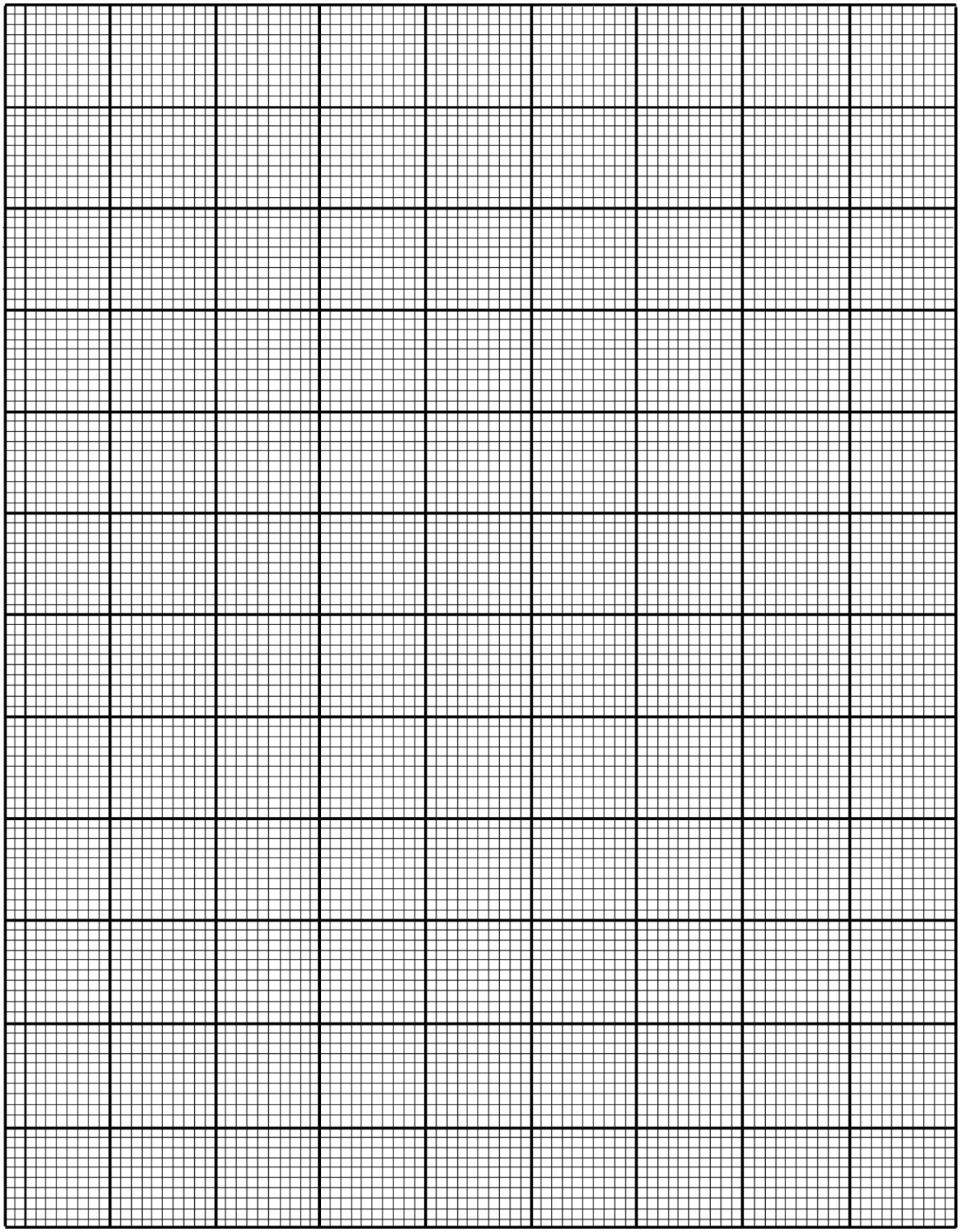
e) Rinse the beaker with distilled water

f) Repeat steps (a) to (e) using 0.2M, 0.3M and 0.4 M sodium thiosulphate.

Table of Results

Concentration of Sodium thiosulphate $Na_2S_2O_3$	**Time taken for the cross to disappear from sight (s)**
0.1M	
0.2M	
0.3M	
0.4M	

g) Plot a graph of concentration of sodium thiosulphate against time taken for the cross to disappear from sight. (6 marks)



END OF QUESTION PAPER