SCHOOL NAME: _____ EXAMINATION NUMBER _____

SHIRE HIGHLANDS EDUCATION DIVISION

2024 MALAWI SCHOOL CERTIFICATE OF EDUCATION MOCK EXAMINATION

CHEMISTRY

Subject Number: M038/II

Thursday, 14 March

Time Allowed: 2 hour sessions

10: 00 am onwards

PAPER II

PRACTICAL

(40 marks)

Instructions

1. **This paper contains 5 pages. Please check.**
2. Write your **name** and **school** at the top of each page.
3. Answer **all** the **four** questions in the spaces provided.
4. Use of scientific calculators is allowed.
5. The maximum marks for each answer is indicated against each question.
6. In the table provided on this page, **tick** against the number of question you have answered.
7. Hand in your paper to the invigilator when time is called to stop writing.

Question Number	Tick if answered	Do no Write in These columns	Marker's name
1			
2			
3			
4			
Total			

SCHOOL NAME: _____ **EXAMINATION NUMBER** _____

SECTION A (20 marks)

1. Using a well-labelled diagram and chemical equations, describe the water cycle.

(10 marks)

2. Describe an experiment that could be carried out to distinguish iron sulphate from zinc sulphate.

(10 marks)

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SECTION B (20 marks)

3. You are provided with **three** solutions: **A**, **B** and **C** containing acidic, amphoteric and basic oxides but **not** necessarily in that order, a red litmus paper, a blue litmus paper and a beaker.

a. Put solution **A** into a beaker.

b. Dip the red and blue litmus papers into the solution.

c. Note and record the colour to which each litmus paper turns in **Table 1**.

Table 1

Solution	Colour to which red litmus paper turns	Colour to which blue litmus paper turns
A		
B		
C		

(6 marks)

d. Rinse the beaker.

e. Repeat steps **a** to **d** with solutions **B**, and **C**.

f. Which solutions contain:

(i) acidic oxide?_____

(1 mark)

(ii) amphoteric oxide?

_____

(1 mark)

(iii) basic oxide?

_____

_____ **(1 mark)**

g. Give **any** one source of errors in the experiment.

_____

(1 mark)

4. You are provided with water from 5 sources: **V**, **W**, **X**, **Y** and **Z**, soap solution in a dropper bottle, 5 test tubes in a rack and a measuring cylinder.

a. Pour 5 ml of water from source **V** into a test tube.
b. Add 10 drops of the soap solution to the water in the test tube.
c. Shake the mixture in the test tube
d. Observe whether lather forms or not and record in **Table 2**.

Table 2

Source of Water	Whether lather forms or not
V	
W	
X	
Y	
Z	

(5 marks)

e. Repeat steps **a** to **d** with water from sources **W**, **X**, **Y** and **Z**.

f. Identify sources which contain:

Soft water**.**

_____

_____

_____

Hard water.

_____

_____

_____

(5 marks)

END OF QUESTION PAPER

NB: This paper contains 5 printed pages.