

# THE MALAWI NATIONAL EXAMINATIONS BOARD

2024 MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

## **AGRICULTURE**

Subject Number: M012/II

Tuesday, 2 July

Time Allowed: 1 h 30 min sessions

10:00 am onwards

## PAPER II **Practical**

(40 marks)

#### Instructions

- This paper contains 6 printed pages. Please check.
- 2. This paper has two sections: A and B.
- Answer all questions in the spaces provided. Marks are indicated against each part of the question.
- Write your Examination Number on all pages.
- 5. In the table provided on this page, tick against the question number you have answered.
- 6. At the end of the examination, hand in your paper to the invigilator.

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



## Section A (20 marks)

1. Form four students carried out an experiment to determine textural class of a 20g soil sample and came up with the following results:

Soil particles	Diameter size (mm)	Weight of soil particles (g)
Sand	2.00 - 0.02	2
Clay	0.02 - 0.002	14
Silt	Below 0.002	4

		(5 mar
Calculate the percentage	of the soil particles in the soil sample.	
Soil particles	Percentage	
Sand		
Clay		-
Silt		
		(3 mar
Give a reason for not rea	ommanding the sail for	
Sive a reason for not rec	ommending the soil for maize production.	



Continued/...



2.

sed.		
		-
		2
	is entage to the	
<u> </u>		
<u> </u>		
	115	mar



Continued/...



### Section B (20 marks)

3.	You a	re provided	with	the	following:	
----	-------	-------------	------	-----	------------	--

- Specimens labelled W, X, and Y.
- Beakers / containers
- Distilled water
- Stirring rod / stick
- 2 leaves of blue litmus paper

### Procedure 1

Rub the specimen W between the thumb and fore finger.

a. Identify the texture of specimen W.

(1 mark)

- b. A farmer applies specimen Y to a maize garden.
  - (i) Identify the cropping system the farmer uses.

(1 mark)

(ii) Explain any one way in which the cropping system mentioned in b(i) is important.

(2 marks)

#### c. Procedure 2

- 1. Put specimen W into the beaker.
- 2. Add distilled water into the beaker.
- 3. Mix the contents in the beaker by stirring with the rod.
- 4. Dip one leaf of litmus paper into the soil solution and observe the colour change.
- (i) Record the colour change of the litmus paper.

(1 mark)

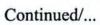


Continued/...



Add one tea spoon full of specimen X to the soil solution in the beaker Stir the mixture using the stirring rod Dip another leaf of litmus paper in the soil solution and observe the colour change.  Record the colour change of the litmus paper.  (1 mark)  Give a reason for the observations on the colour of the litmus paper observed in c (i) and (ii).
Add one tea spoon full of specimen X to the soil solution in the beaker Stir the mixture using the stirring rod Dip another leaf of litmus paper in the soil solution and observe the colour change.  Record the colour change of the litmus paper.  (1 mark)  Give a reason for the observations on the colour of the litmus paper
Stir the mixture using the stirring rod Dip another leaf of litmus paper in the soil solution and observe the colour change.  Record the colour change of the litmus paper.  (1 mark)  Give a reason for the observations on the colour of the litmus paper
i) Give a reason for the observations on the colour of the litmus paper
i) Give a reason for the observations on the colour of the litmus paper
(1 mark)
ame the chemical property of specimen W being investigated.
(1 mark)  Explain one way in which application of specimen X would improve maize roduction.





(2 marks)



M012/11

	are provided with the following specimens labelled M and N and sand paper.
Extra	act the seeds from specimen M.
	ive any two ways in which the activity performed on specimen M is important.
_	(2 marks)
Proce	edure 2
From	the extracted seeds, choose five seeds which can be used for plant breeding.
b. (i)	Name the method of crop improvement used in the procedure.
	(1 mark)
(ii)	State any <b>two</b> characteristics that have been used to choose the five seeds.
	(2 marks)
Proce	
Using specim	the piece of sand paper provided, conduct a pasture seed treatment on ten N.
c. (i)	Name the method of seed treatment used in procedure 3.
<b>/</b> **>	(1 mark)
(ii)	Describe the procedure which was used during the seed treatment in c (i).
	(2 mayles)
(iii)	Explain <b>one</b> way in which the procedure carried out in <b>c</b> (ii) is important.
	(2 marks)



This paper contains 6 printed pages.

