EXAMINATION NO.: _____

THE MALAWI NATIONAL EXAMINATIONS BOARD

2025 MALAWI SCHOOL CERTIFICATE OF EDUCATION EXAMINATION

BIOLOGY

Subject Number: M022/II

Tuesday, 15 July

Time Allowed: 1 h 30 min sessions
10:00 am onwards

PAPER II

(40 marks)

Practical

Instructions:

1. **This paper contains 6 printed pages. Please check.**
2. Write your **Examination Number** at the top of each page of this question paper.
3. This paper contains **two** sections, **A** and **B.** Section **A** has two descriptive questions and section **B** has **two** questions on experiment.
4. Answer **all** the **four** questions in the spaces provided in this question paper. The maximum number of marks for each answer is indicated against each question.
5. Use a pencil for all drawings.
6. In the table provided on this page, **tick** against the question number you have answered.
7. At the end of the examination, hand in your question paper to the invigilator when time is called to stop writing.

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

Section A (20 marks)

Answer **both** questions in this section in the spaces provided.

1. Describe an experiment that could be carried out to show that soaked maize seeds contain reducing sugars. In the description, include materials, procedure, expected results and conclusion.

(10 marks)

Continued/...

2. The **table below** shows results of an investigation on the relationship between number of cigarettes smoked per day and the risk of suffering from lung cancer.

Number of cigarettes smoked per day	0	8	20	35
Risk of suffering from lung cancer	x1	x7	x20	x32

a. List any **two** materials that would be used in the investigation.

_____

_____

(2 marks)

b. Mention any **two** variables that were kept constant during the investigation.

_____

_____

(2 marks)

c. (i) Plot a graph of risk of suffering from lung cancer against number of cigarettes smoked per day on the graph paper on **page 4**. **(4 marks)**

(ii) Using the graph, find the risk of suffering from lung cancer when 25 cigarettes are smoked per day.

_____

(1 mark)

d. What relationship can be drawn from the graph?

_____

_____

_____

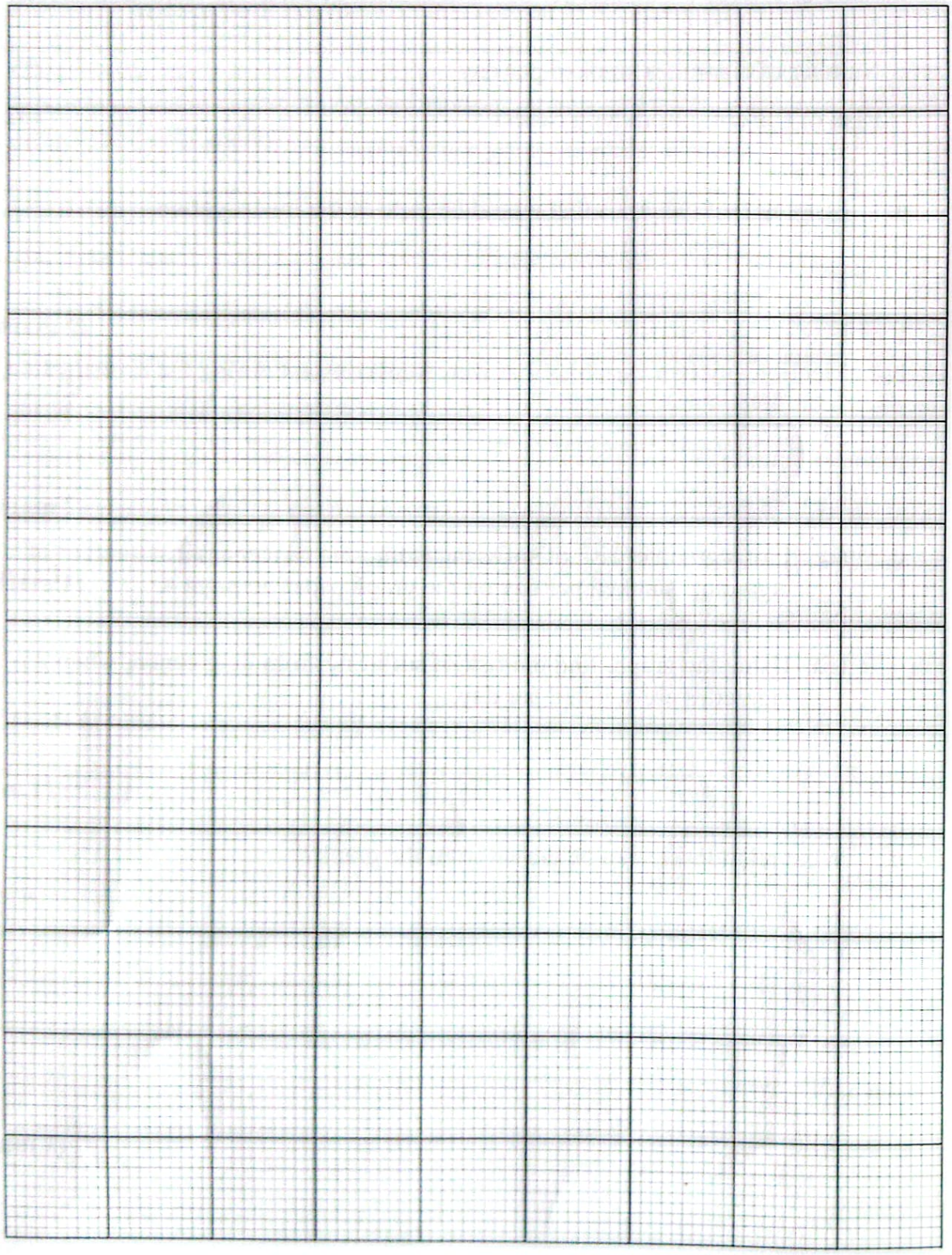
_____

_____

(1 mark)

Continued/…

2. c. (i) **(Continued)**



Continued/...

Section B (20 marks)

Answer **both** questions in this section in the spaces provided.

3. You are provided with specimens labelled **R, S** and **T**.

a. Name the habitat in which specimens **R** and **T** are adapted to grow.

R: _____ **(1 mark)**

T: _____ **(1 mark)**

b. Describe any **one** adaptation of specimen **S** to its habitat.

_____

_____

(2 marks)

c. Identify **two** specimens which might have evolved from a common ancestor.

_____

(1 mark)

d. Explain the reason for the answer in **(c)**.

_____

_____

_____

(2 marks)

e. Identify the type of leaf of specimen **T**.

_____

(1 mark)

f. State any **two** observable structural differences between specimen **S** and **T**.

_____

_____

_____

_____

_____

(2 marks)

Continued/...

4. You are provided with specimens labelled **U, V, W**, a knife and a ruler.

Procedure

a. Using the knife, make a cross section of specimen **U**, draw the cross section and label any **two** parts.

(3 marks)

b. (i) Measure the length of specimen **V** and record it in millimeters.

_____

(1 mark)

(ii) Suppose specimen **V** was drawn to a magnification of x1.45, calculate the length of the drawing.

(3 marks)

c. (i) Mention the mode of seed dispersal for specimen **W**.

_____

(1 mark)

(ii) Give a reason for the answer in **(i)**.

_____

_____

(2 marks)

END OF QUESTION PAPER

NB: This paper contains 6 printed pages.