



MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education

THE MOCK EXAMINATIONS, 2026

231/1

BIOLOGY

PAPER 1

May 2026

Time: 2 Hours

Name: **Admission No:**

Stream: **Signature:** **Wednesday, 3rd June, 2026; 11:00-1.00pm**

Instructions

- (a) Write your name and admission number in the spaces provided above
- (b) This paper consists of 26 questions
- (c) Answer **ALL** questions in section A
- (d) All answers should be written in the spaces provided on the question paper.

FOR EXAMINERS'USE ONLY

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORES
1-26	80	

1. Which branch of biology that deals with the study of algae (1 mark)

(b) Pepsinogen and trypsinogen are precursor forms of proteases. Name the substances that activates the above pro-enzymes to their active forms. (2 marks)

(a) Pepsinogen

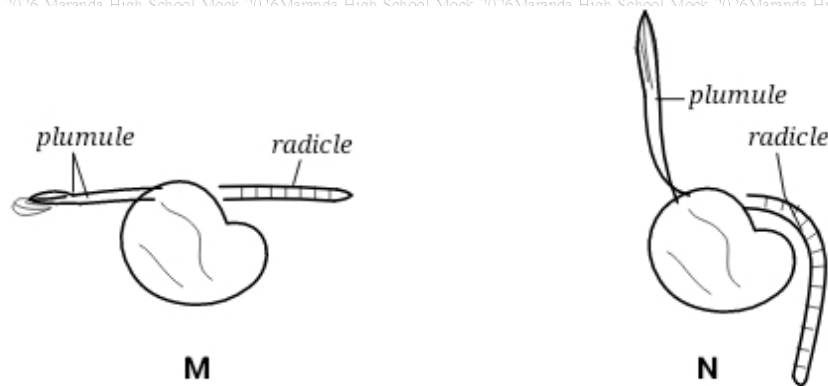
(b) Trypsinogen.

2. Name two factors that denature cell membranes. (2 marks)

3. Name two factors that can be used to determine age of fossils. (2 marks)

b) Describe the importance of biochemical reactions such as ATP, DNA and RNA in the study of evolution. (2 marks)

4. An experiment was set to investigate a certain aspect of response. A seedling was placed in a horizontal position as shown in the figure **M** below. After 24 hours, the set up was as shown in figure **N**.



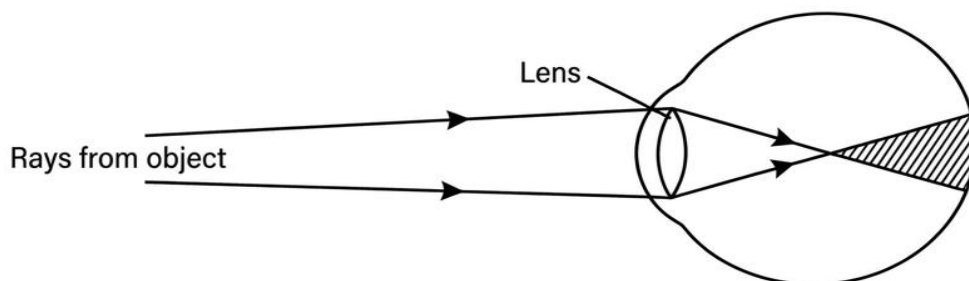
(a) Name the response exhibited by the seedling (1mark)

(b) Explain the curvature of the shoot upwards (3marks)

5. State any two structures of the eye that play a role in accommodation. (3marks)

6. Explain why mosquito bite does not cause HIV/AIDS (1mark)

7. The diagram below represents a certain common defect of the eye in human. Study it and answer the questions that follow.



(i) Give the name of the defect shown below. (1mark)

(ii) Name the cause of the defect. (1mark)

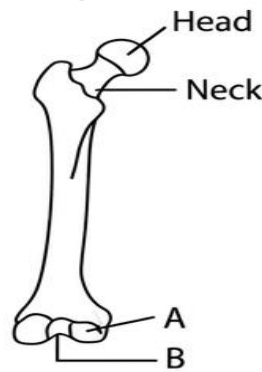
(iii) How is the above condition corrected during a hospital visit? (1mark)

8. Give **one** structural and functional difference between smooth and rough endoplasmic reticulum. (2marks)

	Smooth endoplasmic reticulum	Rough endoplasmic reticulum
Structural		
Functional		

9. State **three** adaptations of the gill of a fish to its functions (3 marks)

10. The diagram below represents a bone from appendicular skeleton. Use it to answer questions that follow.



(i) Identify parts labeled A and B. (2marks)

A.

B.

(ii) Name the joint formed at the proximal end of the above bone. (1mark)

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11. James and Mary made decision to get married but before that they approached a qualified medical doctor for genetic counseling.

(a) Give one reasons why this was important. (1mark)

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(b) State one way the medical doctor did the genetic diagnosis. (2marks)

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12. Name one bacterial disease that affect,

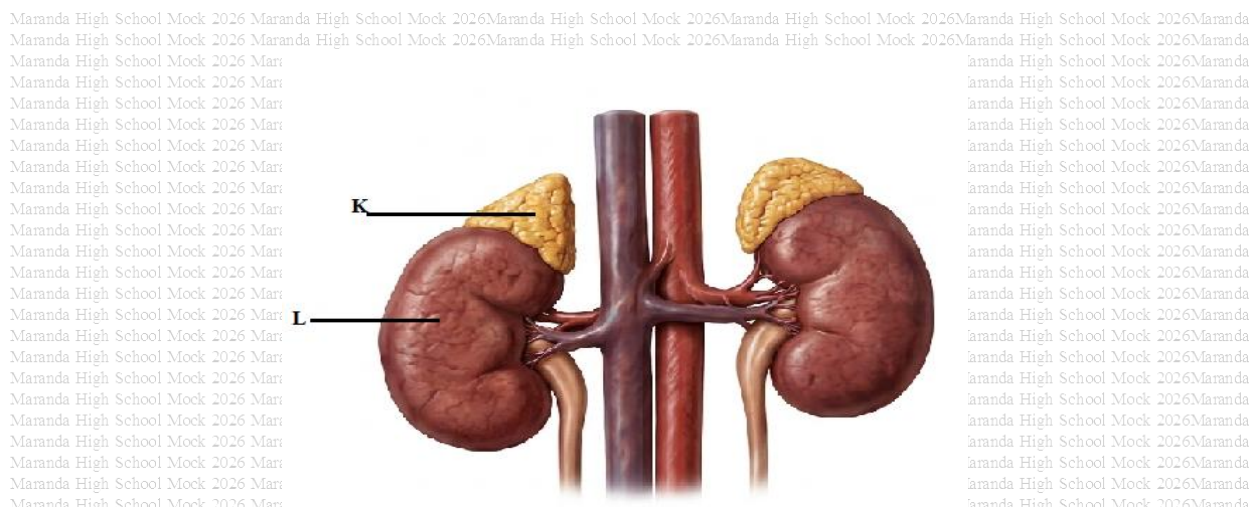
(i) Liver (1mark)

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(ii) What is the role of the colchicine as excretory product in plants. (1mark)

.....

13. The diagram below represents part of human urinary system, examine it.



(a) Organ L is an excretory organ. Give two stages involved in excretion by organ. (2marks)

(b) Name **any one** hormone produced by K and give its functions. (1marks)

14. Explain effect of the cyanide and mercury to active transport. (2marks)

15. Distinguish between a bone and a ligament. (1mark)

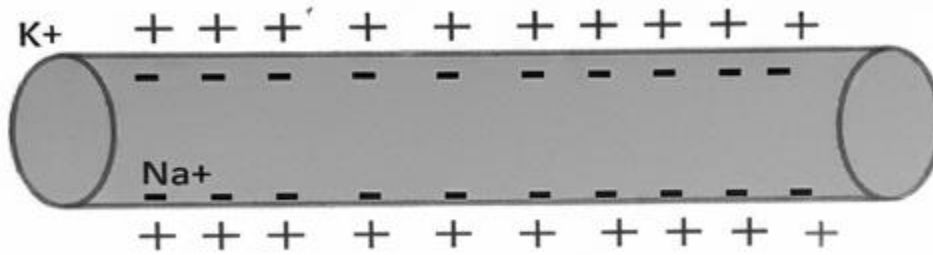
16. The shoot of a woody plant is less droopy on a hot sunny day. Explain this observation. (2marks)

17. What is the biological reason for spraying oil on stagnant water in the control of malaria? (2marks)

(b) Give a reason why the practice should be discouraged. (1mark)

(c) Explain biological importance of mosquito to human being. (1mark)

18. The diagram below shows the electrical state of an axon.



(a) Identify the electrical state represented by the diagram above. (1mark)

(b) Describe how the above electrical state can be reversed. (1mark)

(c) What is the function of acetylcholine

(1 mark)

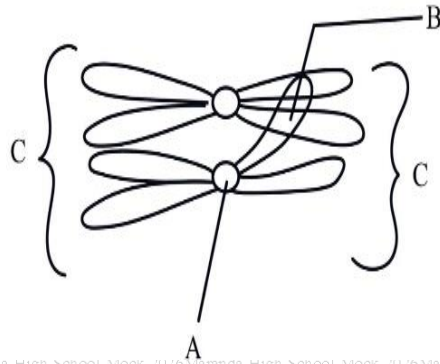
19(a) Pregnancy continues if the ovary of an expectant mother is removed after four months. Explain.

(2marks)

(b) Explain why hormone testosterone still exerts its influence even when vas deferens has been cut.

(2marks)

20. The diagram below shows a phenomenon which occurs during cell division.



(a) Name the part labelled A

(1mark)

(b) State the biological importance of the part labelled B

(2marks)

(c) Name the structure in humans in this phenomenon occurs (1mark)

21. During a microscopy experiment, a group of Maranda high school students observed 6 cells under a field of view whose diameter was 1.8mm. If they used eye piece lens of magnification of X15 and objective lens magnification X40, determine the actual length of one cell. (3marks)

(b) Two student viewed plant cell using a compound light microscope, one viewed 30 cells while the other one viewed 11 cells across the field of view. Explain the difference in the number of cells. (2marks)

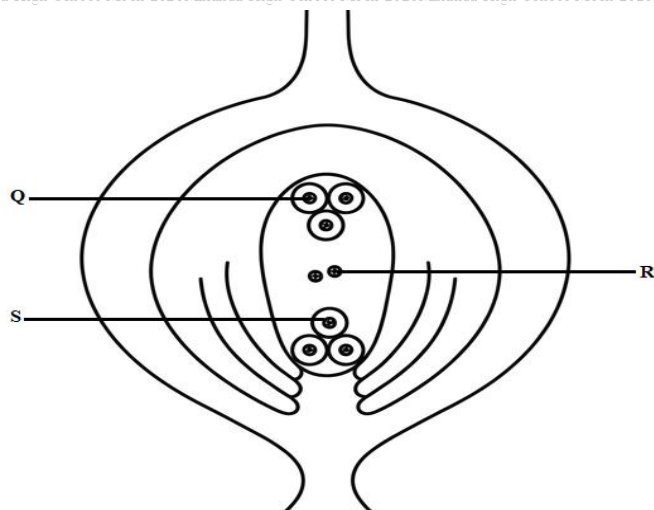
22 (a) Name **two** hormones that influence metamorphosis in insects. (2marks)

(b) State **one** biological importance of larval and adult stage in insect metamorphosis (2marks)

Larval stage

Adult

23. The diagram below shows a stage during fertilization in plant.



(i) Name the parts labeled Q, R, and S. (3marks)

Q.....

R.....

S.....

(ii) State the functions of the pollen tube. (2marks)

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(iii) On the diagram, label the micropyle. (1mark)

24(a) Distinguish between back cross and test cross. (2marks)

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.....

(b) The diagram below shows a base sequence of a nucleic acid strand. Observe it and answer the questions that follows:

GTTAGCTGA

.....

(i)How many amino acids are found in the nucleic acid above. (1mark)

(ii) Show the complementary strand for the above nucleic acid. (1mark)

25.The following are text message on a cell phone that represents gene mutation.

	Intended message	Actual message
I	I hate meat	I ate meat
II	This is my team	This is my mate

Identify the type of gene mutation represented in each case. (2marks)

(i).....

(ii).....

26.(a) Define the term guttation. (1 mark)

(b) Name two plant tissues that are thickened with lignin. (2 marks)

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