KCSE PREDICTION EXAMS SERIES, 2024

Kenya Certificate of Secondary Education

443/ 2 - Biology - Paper 2

(Theory)

T3- 2024 – Time 2 hours

KCSE TRIAL EXAMS, 2024

Name …… **Adm Number**……..

Candidate's Signature ……..…….. **Date** ……

Instructions to candidate

a) Write your name and class in the spaces provided above.
b) Sign and write the date of examination in the spaces provided above.
c) This paper consists of **two** sections: **A** and **B**.
d) Answer **ALL** the questions in section **A** in the spaces provided.
e) In section **B** answer **question 6 (compulsory)** and **either question 7 or question 8** in the spaces provided after question 8Candidates should answer the questions in English.
f) Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

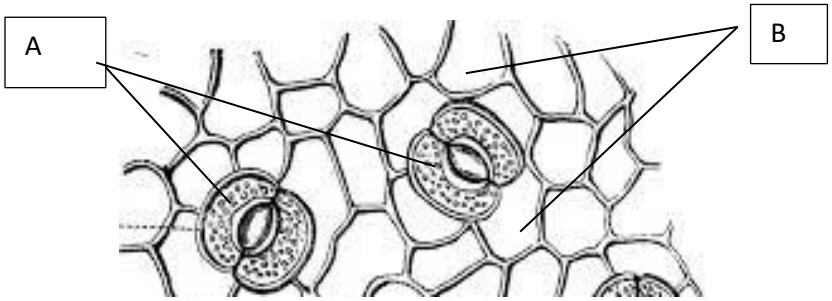
KCSE 2024

For Examiner's Use Only

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
A	1 2 3 4 5	8 8 8 8 8	
B	6 7 or 8	20 20 20	
TOTAL SCORE		80 MARKS	

SECTION A (40 MARKS)

1. Study the diagram below and answer the questions that follow



(a) Explain what would happen to the cells labelled a sunny day. (3marks)

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(b) State structural differences between cells labelled **A** and **B**. (3marks)

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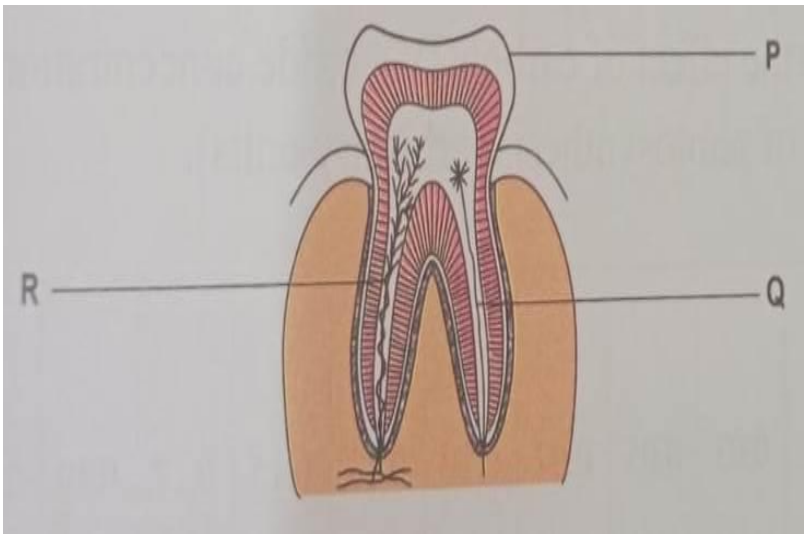
(c) Name the plant hormone that promotes the closure of the stomata. (1mark)

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(d) Name the site where light independent stage occurs. (1mark)

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2. The diagram below represents a section through a human tooth.



i) Name the type of tooth shown (1mark)

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ii) Give a reason for your answer (i) above. (1mark)

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iii) Name the structures P, Q, R. (3marks)

P –

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Q –

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R –

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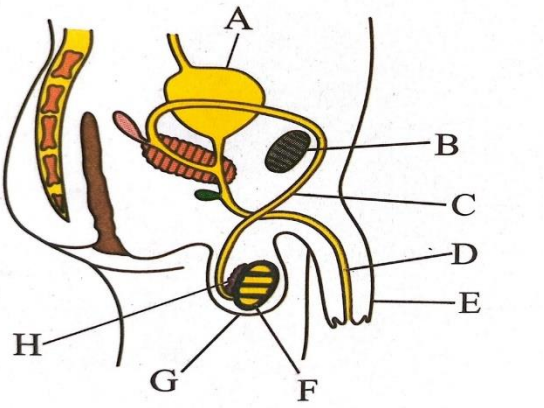
iv) State three ways of keeping teeth healthy. (3marks)

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3. The diagram below is a side view of the human male reproductive system



a) Name the parts labelled D and G. (2marks)

D-…….

G-…….

b) How are parts labelled E and H adapted for their functions? (4marks)

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c) Give the names of two accessory sex glands and state their functions. (2marks)

Accessory gland -

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Function -

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Accessory gland -

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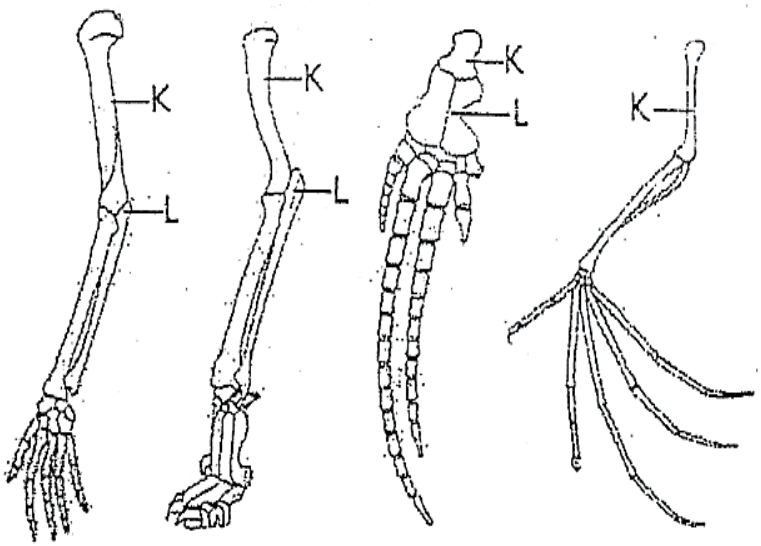
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Function -

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4. Study the diagrams below and answer the questions that follow.



(a) Explain the type of evolutionary evidence illustrated above. (4 marks)

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(b) Name the parts labelled **K** and **L**. (2 marks)

K ……

L ……

(c) Name the joint formed:

(i) At the proximal end of bone **K**. (1 mark)

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(ii) At the distal end of bone **K**. (1 mark)

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5. In a breeding experiment a pure breed black mouse was crossed with a pure white one. All F_1 off springs were grey in color. Using letter **B** to represent the gene for black color and **W** to represent the gene for white color:
   a) Give the parental genotypes. (1mark)

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   b) If F1 offsprings were selfed, use a genetic cross to show the phenotypic ratio of F_2 generation. (5marks)

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   c) Explain the presence of the grey color from the cross between a black and white mouse. (1marks)

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   d) Give **one** disadvantage of inbreeding in animal breeding. (1 mark)

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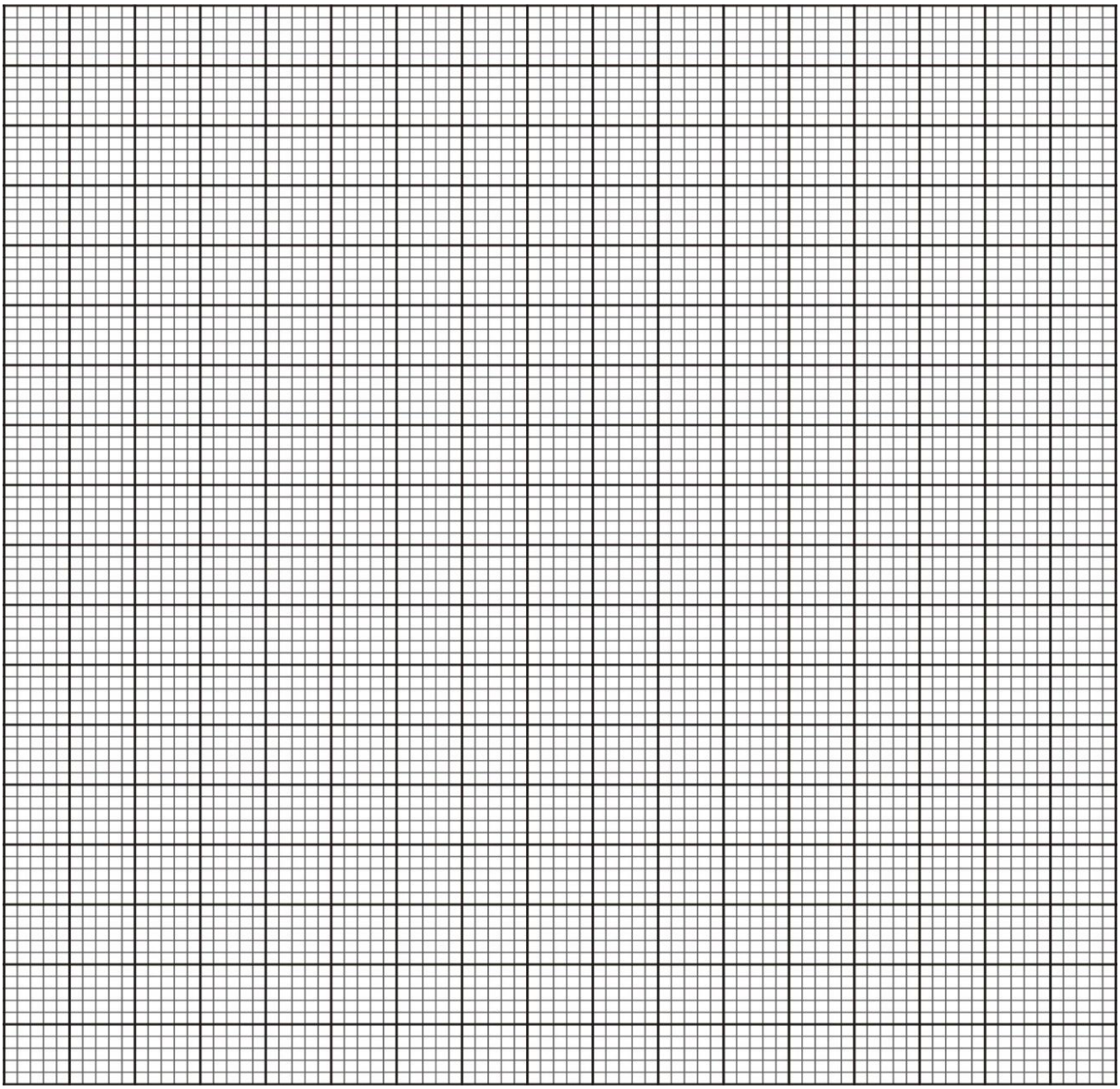
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SECTION B.

6. The pressure in the flow of blood in a mammal was determined at two different vessels; X and Y. The data was taken within a period of 1 minute and was presented as follows.

Time in seconds	Blood pressure in	
	Vessel X	**Vessel Y**
0	160	320
10	165	360
20	170	320
30	180	400
40	170	360
50	160	320
60	160	360

a) Plot the graph of blood pressure in both vessels against time in the same axis. (7marks)



(b) Describe the trend of each curve. (2marks)

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(c) From the graph, suggest the possible identity for:

(i) Blood vessel X. (1mark)

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(ii) Blood vessel Y. (1mark)

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(d) Give reason for your answer in (c) (i) and (ii) above. (2marks)

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(e)Explain a factor that would result in to an increase in blood pressure in both the blood vessels above. (2marks)

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(f) State two structural differences between the two vessels mentioned in C above. (2marks)

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(g) Name two diseases of the circulatory system in humans. (2marks)

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(h) Other than, transport of substances state one other function of blood. (1mark)

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7. Describe the process of hearing in man. (20 marks)

8. (a) Explain how high blood sugar is regulated in the body (4marks)

(b) Describe secondary thickening in flowering plants. (16marks)

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