

MANGU HIGH SCHOOL

NAME:ADM NO:

CLASS: DATE:

Kenya Certificate of Secondary Education (K.C.S.E.)

231/3

PAPER 3

BIOLOGY

TIME 1HR 45 MINUTES

MOCK 2022 **INSTRUCTIONS TO CANDIDATES**

- (i) *Write, Name, class and admission number in the spaces provided at the top of this page.*
- (ii) *Answer ALL the questions.*
- (iii) *You are required to spend the first 15 minutes of the 1¾ hours allowed for this paper reading the whole paper carefully before commencing your work.*
- (iv) *Answers **MUST** be written in the spaces provided in this question paper.*
- (v) *Additional pages **MUST NOT** be inserted.*
- (vi) *This paper consists of six (6) printed pages.*
- (vii) *Check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*

FOR EXAMINERS USE ONLY

Question	Maximum Score	Candidate's Score
1	11	
2	11	
3	18	
	TOTAL	

1. You are provided with **Specimen K**. Carefully cut a transverse section through specimen **K** using a scalpel provided.

(a) (i) By observing one of the two halves of specimen **K**, Give **two** reasons to **prove** that specimen **K** has **axile** placentation (2mks)

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(ii) Squeeze some juice from **specimen K** into 100ml beaker provided and label it as **juice K**. using a portion of **juice K**, carry out the food test using the reagents provided and complete the table below. (NB preserve the remaining portion of **juice K** for use in question 2.) (6mks)

Food substance	Procedure	Observation	conclusion

(iii) Name the **deficiency** disease that results from **lack** of the food substance **present** in juice **K**. (1mk)

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(iv) Highlight **two** symptoms of the disease named in (a) (iii) above (2mks)

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2. Put 2cm^3 of liquid labelled C into a test tube. Draw some of the juice from specimen K into a dropper. Add 4 drops of the juice into the test tube with solution C and shake.

(a) (i) State your observation. (1mk)

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(ii) State the part of the human body where the process demonstrated above occurs and the enzyme that carries out the process.

Part of body..... (1mk)

Enzyme..... (1mk)

(iii) Which gland produces the enzyme stated in (a)(ii) above? (1mk)

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(b) Take a small amount of substance B provided and add to it 2cm^3 of sodium hydrogen carbonate solution.

(i) State your observations (1mk)

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(ii) Which process in the body is illustrated above? (1mk)

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(iii) State the part of the body where the above process takes place (1mk)

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(iv) State two functions of substance B in the body (2mks)

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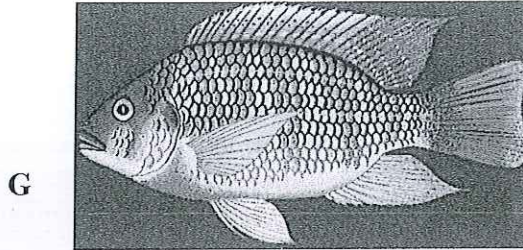
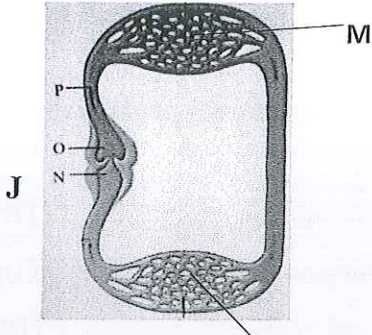
(v) Name two diseases of the circulatory system caused by excess cholesterol in food. (2mks)

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3. (A) photograph J shows the circulatory system of organism represented by photograph G.



Systemic circulation

(i) Giving **one** reason to your answer name the **class** to which specimen G belongs.

Class..... (1mk)

Reason..... (1mk)

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(ii) Name the part labelled: (3mks)

M

N

O

(iii) Giving **one** reason to your answer state the type of **closed** circulatory system shown by photograph J

Type of circulatory system.....(1mk)

Reason..... (1mk)

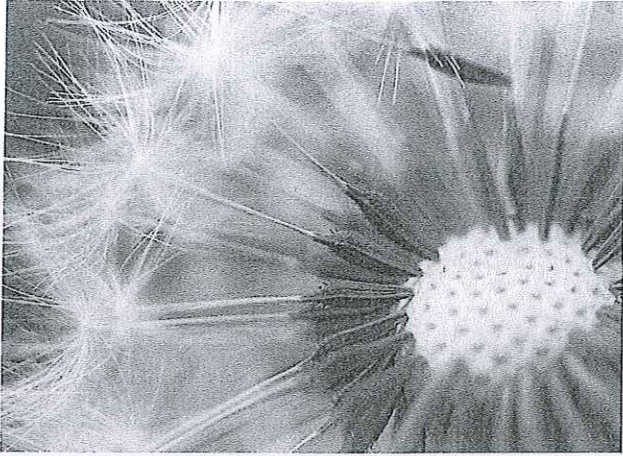
(iv) State two features of specimen G that enhances its **streamlined** shape (2mks)

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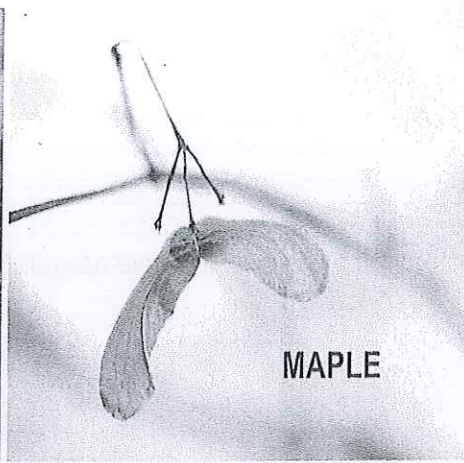
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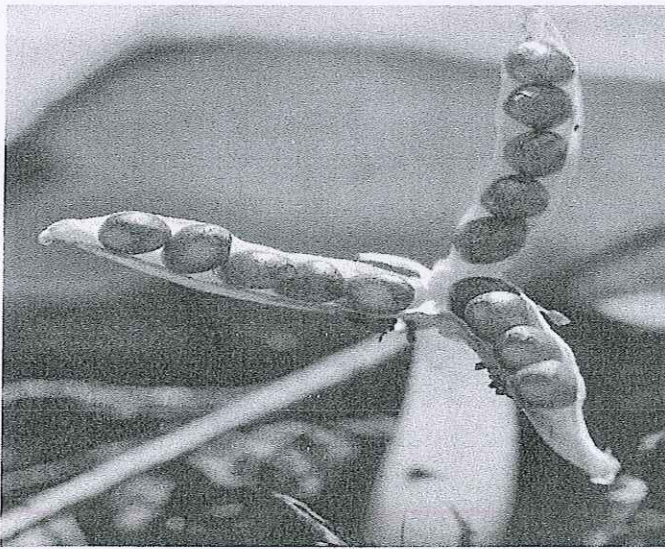
(B) The diagrams below show different types of fruits. Use them to answer the question that follow.



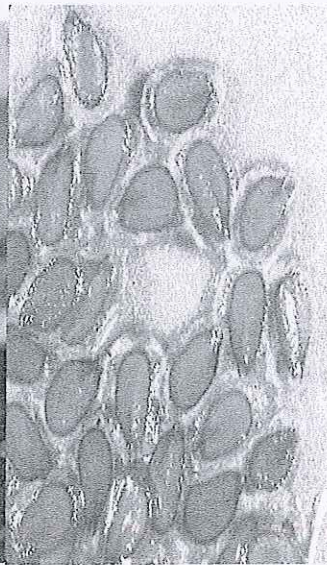
R 1



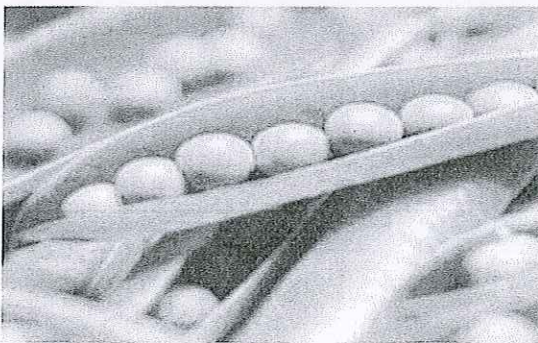
R 2



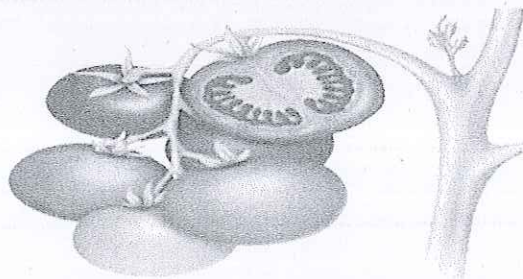
R 3



R 4



R 5



R 6

(ii) Draw a well labeled diagram of one on the fruits in photograph R1 in the diagram above (3 Mark)

(b) State the mode of dispersal and give reasons for the fruits shown in photograph R1, R2 and R3

(6 Marks)

R1

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Reason

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R 2

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Reason

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R 3

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Reason

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