NAME ……..…… Index No. ……

Candidate's Signature:……..... Date: ……..…..……..

231/3
BIOLOGY
PAPER 3
PRACTICAL
TIME: $1\frac{3}{4}$ hours

Keya Certificate of Secondary Education (KCSE)4MCK Joint exam
BIOLOGY
PAPER 3
PRACTICAL
TIME: $1\frac{3}{4}$ hours

Instructions to candidates

- ***Write your name and Index number in the spaces provided above***
- ***Sign and write the date of the examination in the spaces provided***
- ***Answer all the questions in the spaces provided***
- ***You are required to spend the first 15 minutes of the* $1\frac{3}{4}$ hours allowed for this paper *reading the whole paper carefully before commencing your work.***
- ***Additional pages must not be allowed***
- ***Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.***

For Examiner's Use Only

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	14	
2	12	
3	14	
Total Score	**40**	

1. You are provided with specimen labeled T, iodine sodium and Benedict's solution. Use it to carry out the tests below
   Take specimen T and using the scapel provided, cut the roots and grind them using a pestle and mortor. Using the reagents, test for the food substances present. Repeat the same procedure for the bulb and leaves. Enter your findings in the table below:(14 marks)

Part	Food	Procedure	Observation	Conclusion
Roots	Starch	(1 mark)	(1 mark)	(1 mark)
	Reducing sugars	(1 mark)	(1 mark)	(1 mark)
Bulb	Starch		(1 mark)	(1 mark)
	Reducing sugars		(1mark)	(1 mark)
Leaves	Starch		(1 mark)	(1 mark)
	Reducing sugars		(1 mark)	(1 mark)

2. The photographs below shows some fruits

Photograph J

Photograph K

Photograph L

a) (i) Name the type of fruit shown in photograph J. (1 mark)

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(ii) Give one reason for your answer in 2.a) (i) above. (1 mark)

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(iii) State the type of placentation in fruit J (1 mark)

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(iv) Suggest the agent of dispersal for fruit J. (1 mark)

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(v) State two ways in which the fruit in photograph J is suited to it's mode of dispersal. (2 marks)

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b) (i) Name the type of fruit in photograph K. (1 mark)

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(ii) State one way in which the fruit in photograph K is suited to its mode of dispersal (1 mark)

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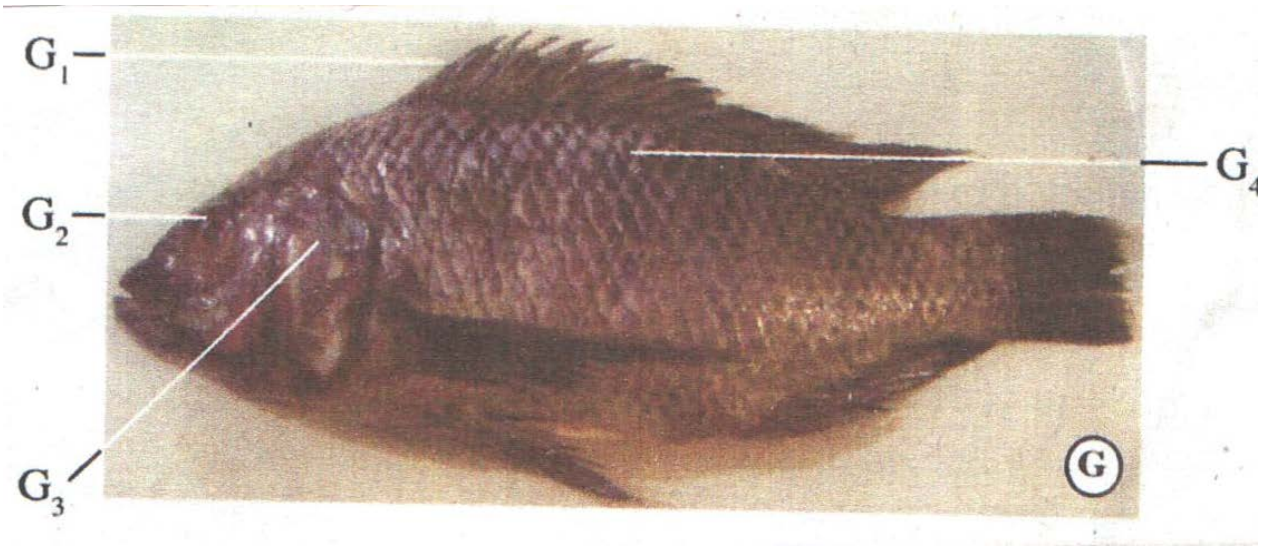
c) Observe fruit labeled L.
Draw a well labeled diagram of one of the fruits when opened. (4 marks)

3. The photograph below represents an aquatic animal. Observe it carefully then answer the questions that follow



a) (i) Identify the class to which the specimen belongs. (1 mark)

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(ii) State the reasons for your answer in a(i) above. (4 marks)

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b) Name the functions of parts labeled G1, G3, and G4 (3 marks)

G1

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G3

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G4

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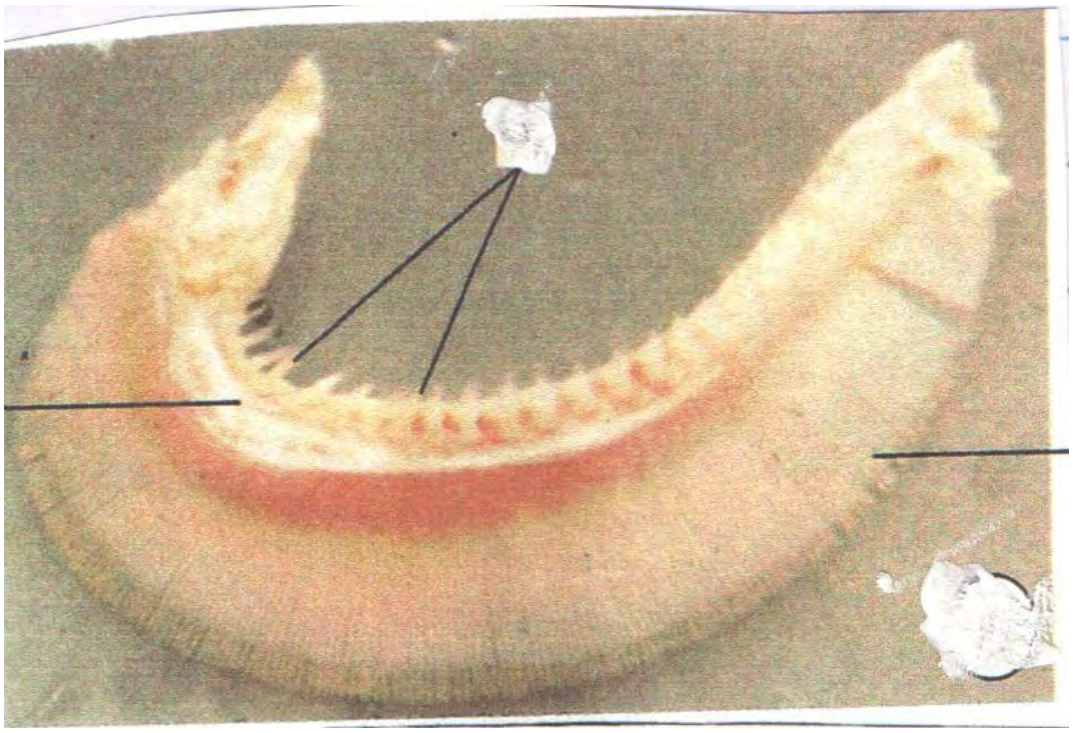
c) The photograph below was removed from exposed G3.



(i) Identify the specimen. (1 mark)

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(ii) State the function of the structure shown by the photograph. (1 mark)

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(iii) State four adaptations of the structure to its function. (4 marks)

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