

Name.....

Index No...../.....

School.....

Candidates Signature.....

Admission number.....

231/3

BIOLOGY**(PRACTICALS)**

Paper 3

July 2018

1³/₄ Hours**NYANDARUA WEST SUBCOUNTY CLUSTER EXAM***Kenya Certificate of Secondary Education (K.C.S.E)***INSTRUCTIONS TO CANDIDATES**

- Write your name and Index Number in the spaces provided above.
- Sign and write date of examination in the spaces provided above.
- Answer **ALL** questions in the spaces provided in the question paper.
- You are **NOT** allowed to start working with the apparatus for the first 15 minutes of the 1³/₄ Hours allowed for this paper. This time is to enable you to read the question paper and make sure you have all the chemicals and apparatus that you may need.
- All workings **MUST** be clearly shown where necessary.
- Mathematical tables and silent electronic calculators may be used.

For Examiners use only.

Section	Question	Maximum Score	Candidates Score
	1	14	
	2	13	
	3	13	
TOTAL SCORE		40	

*This paper consists of 6 Printed pages.**Candidates should check the question paper to ensure that all the Papers are printed as indicated and no questions are missing*

1. You are provided with visking tubing labeled Q, a piece of thread and a solution labeled K. Dip the visking tubing in distilled water to moisten it, open it, and then tie one end tightly with the thread provided. Half-fill the visking tubing with solution K then tie the open end of the tubing tightly. Ensure solution K does not spill out of the tubing. Immerse the visking tubing into distilled water in a beaker. Ensure that the visking tubing is completely immersed in the distilled water. Leave the set-up for 20 minutes. Record your observations after 20 minutes.

(a)(i) Observation (1mk)

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(ii) Explain your observations in a (i) above (2mks)

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(b) Remove the visking tubing carefully. Ensure the contents of the visking tubing do not mix with that of the beaker. Using the reagents provided, test for the food substance present in the visking tubing and the beaker. (8 Marks)

I Solution in the Visking tubing

Food test	Procedure	Observations	Deductions
Starch			
Reducing sugars			

I Solution in the Beaker

Food test	Procedure	Observations	Deductions
Starch			
Reducing sugars			

(c) Explain the observations and deductions in (b) above.

(2 marks)

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d) State **one** application of the physiological process demonstrated above.

(1 Marks)

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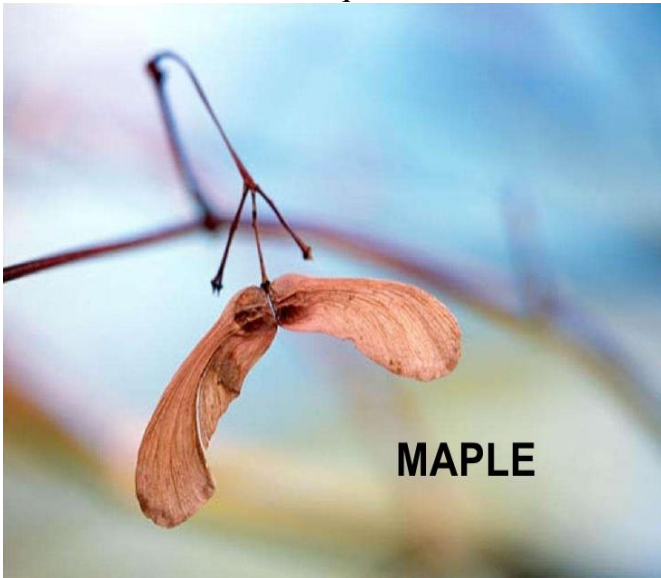
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Q2. The diagrams below show different types of fruits. Use them to answer the question that follow.



R 1



MAPLE

R 2



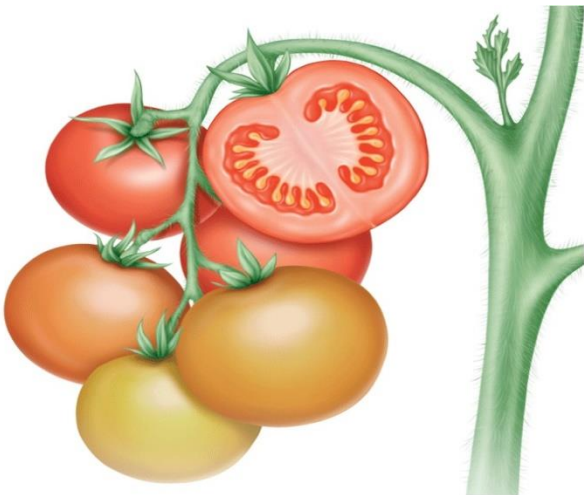
R 3



R 4



R 5



R 6

2 (a) i) Name the type of placentation shown in photograph R5 and R6 (2 Mark)

R5.....

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R6

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(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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c) Explain **two** adaptations of fruit shown in photograph R 4. (2 Marks)

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Q 3. The diagrams below show different bones of the appendicular skeleton. Use them to answer the question that follows.



S1



S2



S3



S4

3 (a). (i) On the diagram, label **three** parts of the bone labeled S1 (3 Marks)

ii) State the function of at least one part that you have labeled in the diagram above (1 Marks)

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b) Identify S2 and S3 and give reasons for your answer. (4 marks)

S2

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Reasons.....

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S3

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Reasons.....

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c) i) Name bone S4 (1 Mark)

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ii) State **two** adaptation of bone named in c (i) above to its function (1 Mark)

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