NAME..... STUDENT No.....

Candidate's Signature..... Date.....

BIOLOGY (231/3)
Paper 3 (PRACTICAL)
TERM II 2018 **TIME: $1^{3}/_{4}$ hours**

MOKASA 2 JOINT EXAMINATIONS

Kenya Certificate of Secondary Education

Instructions to candidates

(a) Write your name and Adm number in the spaces provided.
(b) Sign and write the date of examination in the spaces provided.
*(c) Answer **all** the questions in the spaces provided.*
(d) You are required to spend the first 15 minutes of the $1^{3}/_{4}$ hours allowed for this paper reading the whole paper carefully before commencing your work.
*(e) Additional pages must **not** be inserted.*
(f) This paper consists of 6 printed pages.
(g) Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
(h) Candidates should answer all the questions in English.

For Examiner's Use Only

QUESTION	MAXIMUM SCORE	CANDIDATE SCORE
	14	
	13	
	13	
	40	

1. You are provided with the following solutions labelled A and B, cork borer, scapel and specimen labelled X, mortar and pestle, iodine solution, 10% sodium hydroxide solution, 1% copper sulphate solution, a ruler, spatula, beaker 10ml measuring cylinder, three test tubes, distilled water and a dropper.

a)i) Cut specimen X into two equal parts, crush one of the parts to make a paste and transfer three spatulaful of the paste into a test tube and add 2ml of distilled water. Decant the mixture into a clean beaker. Using the reagents provided carry out food test. (6 marks)

Food substance	Procedure	Observation	Conclusion

ii) Name the deficiency disease that a child will suffer from if is fed only on above food for a longer period of time. (1 mark)

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b) Using a cork borer provided make two equal strips of 2cm from the remaining part of specimen x, put one of them in solution A and the other in solution B for about 25 minutes and remove them from the solutions.

(i) State three comparative observations between the two strips (3 marks)

The strip that was in solution A	The strip that was in solution B

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The strip that was in solution A	The strip that was in solution B

ii) Account for the above observations (3 marks)

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iii) Describe solution A in relation to the cell sap of specimen X.

Solution A ..... (1 mark)

2. a) Cut specimen K transversely into two equal parts and use it together with specimen labelled L to fill the table below.

	Specimen K	Specimen L
Type of fruit	(1 mk)	(1 mk)
Type of placentation	(1 mk)	(1 mk)
Mode of dispersal	(1 mk)	(1 mk)
Reason for the above mode of dispersal	(2 mks)	(1 mk)

b) Draw and label a cross-section of one of the parts of specimen K (4 marks)

3. You are provided with specimen labelled W and Z. Use them to answer the questions below.

a) Identify the specimens and name the part of the body where they are found. (4 marks)

	Name	Part of the body
i) W		
ii) Z		

b) Identify the part labelled a, b and c on specimen W (3 marks)

a .....

b .....

c .....

c) List down three adaptation of specimen Z to its function (3 marks)

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d)i) Name the joint that is formed at the part labelled M on the specimen Z (1 mark)

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ii) Name the joint between specimen W and another specimen of the same kind (1 mark)

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