

NAME:.....INDEX NO:.....

SCHOOL:.....CANDIDATE'S SIGN:.....

DATE:.....

**231/3  
BIOLOGY  
PAPER 3  
JUNE 2016  
TIME: 2 HOURS**

**CENTRAL YEARLY MEETING OF FRIENDS (CYMF) -2016**  
*Kenya certificate of Secondary Education*

**231/3  
BIOLOGY  
PAPER 3**

**INSTRUCTIONS TO CANDIDATES**

1. Write your name and index number in the spaces provided above.
2. You are required to spent the first 15 mins of the hour allowed for this paper reading the whole paper carefully before commencing for your work
3. Sign and write the date of examination in the spaces provided above.
4. Answer *all* the questions in the spaces provided.
5. Candidates should check the question paper to ascertain that all the pages are printed as indicated and no question is missing.
6. Candidate should answer all the questions in English

**FOR EXAMINER'S USE ONLY**

<b>QUESTIONS</b>	<b>MAXIMUM SCORE</b>	<b>CANDIDATE'S SCORE</b>
1	13	
2	12	
3	15	
<b>TOTAL SCORE</b>	<b>40</b>	

*This paper consists of 6 printed pages Check the Question paper to ensure that all pages are printed as indicated and no question are missing.*

1. You are provided with a visking tubing ,liquids J and K ,iodine solution and D C PIP solution  
(a)Using iodine solution test for the food substance in 2ml of each of the liquids J and K, and record your observation.

(i) Observation in liquid J (1mk)

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.....

(ii)Observation in liquid K (1mk)

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.....

(b)Use DCPIP solution to test for food substances in 2ml of each of the liquids J and K and record observation

(i)Observation in liquid J (1mk)

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.....

(ii) Observation in liquid K (1mk)

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.....

(c) Tie one end of the visking tubing tightly using one of the pieces of thread provided .Then pour 10ml of liquid J into the visking tubing using a long dropper. Tie the other end of the visking tubing tightly .Ensure that there is no leakage at both ends of the visking tubing .Pour 30 ml of liquid K into 100ml beaker. Wash the outside of the visking tubing with distilled water.Place the visking in a horizontal position inside 100 ml beaker containing liquid K .Ensure that the visking tubing is fully submerged by liquid K. Allow the set up to stand for 40 minutes. Remove the visking tubing using the iodine solution and DCPIP solution provided ,carry out test for food substances in the liquid left in 100 ml beaker. Record the test , procedure, observation and conclusion in the table given .

Test	Procedure	Observation	Conclusion

(d) Account for your results in the table above (5mks)

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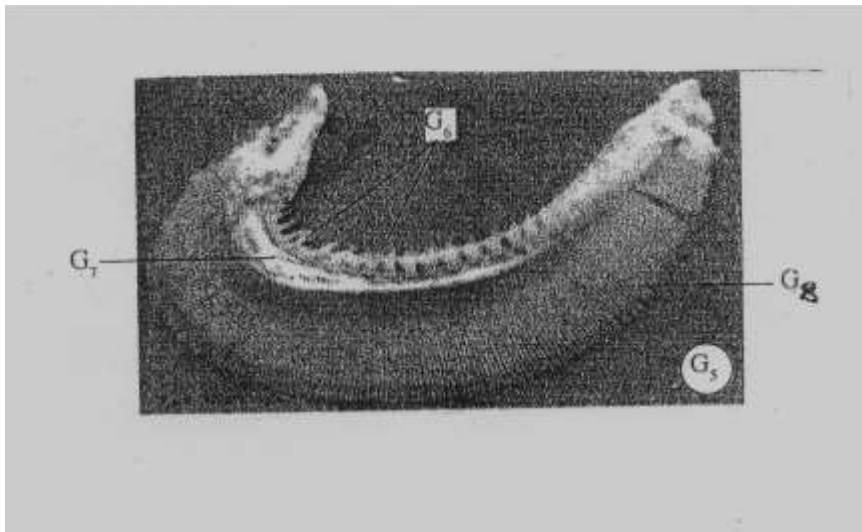
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2. Below is a photograph of specimen G 5. Study the photograph and then answer the questions that follow.



(a) Identify specimen G5 (1mk)

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(b) Name the parts labeled G6, G7 and G8 (3mks)

G6.....

G7.....

G8.....

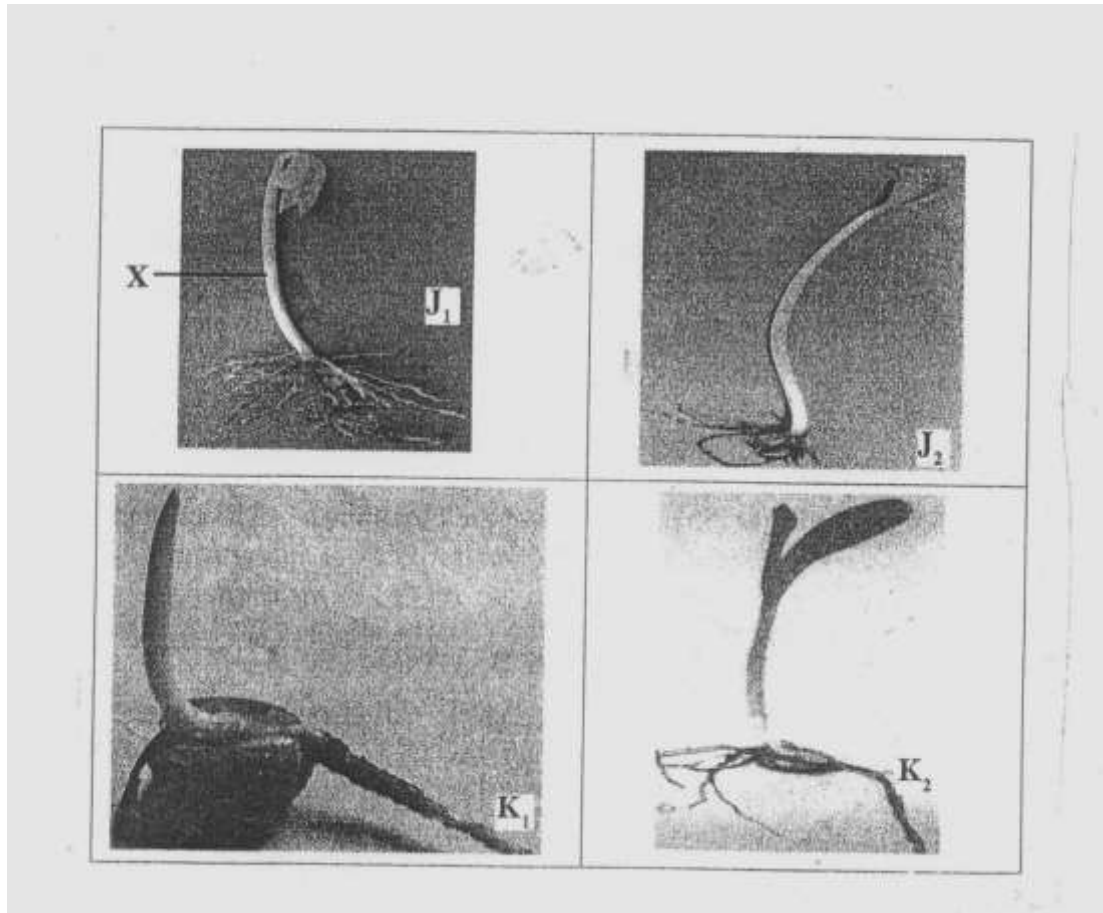
(c) State two functions of specimen G5 (2mks)

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(d) State the adaptation of specimen G5 to its function (6mks)

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3. You are provided with photograph of specimens labeled J1,J2,K1,K2.Examine them



(a)With a reason ,name the classes to which specimens J1,J2,K1 and K2 belongs. (4mks)

Class J1 and J2.....

Reason .....

Class K1 and K2.....

Reason .....

(b)(i) Name the part labeled X in specimen J (1mk)

.....

(ii)What is the importance of curvature

(1mk)

.....  
.....

(c )Explain how the curved part in J, will straighten so that the stem will look like that of J2.

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.....  
.....

(d)Name the part that protects the plumule in specimen K1 and K2

(1mk)

.....  
.....

(e)(i)Which of the two types of seedling may form swellings on the roots later in its life? (1mk)

.....  
.....

(ii)Give the name of the swellings in (e) (i)above

(1mk)

.....  
.....

(iii)Name the organism that will be found on the swellings

(1mk)

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.....

(f)Name the structures found on the stems just below the leaves of specimen J2

(1mk)

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