

Name..... Index No:.....

231/3  
BIOLOGY  
PAPER 3  
(THEORY)  
JULY/AUGUST 2014  
TIME: 2 HOURS

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

**NYAMIRA SUB-COUNTY JOINT EVALUATION EXAM**  
*Kenya Certificate of Secondary Education (K.C.S.E.)*

231/3  
Biology  
Paper 3  
2 ½ Hours

**INSTRUCTIONS TO CANDIDATES**

- Write your **name** and **index number** in the spaces provided above
- **Sign** and write the **date** of examination in the spaces provided.
- Answer **all** the questions in the spaces provided.

**For Examiners Use Only**

Question	Maximum score	Candidate's score
1	17	
2	12	
3	11	
Total	40	

*This paper consists of 4 printed pages. Candidates should check to ascertain that all pages are printed as indicated and that no questions are missing.*

1. You are provided with specimen K. make thin cross sections of the leaf stalk. Place the sections on a glass slide. Using a dropper, add a drop of methylene blue to the sections. After 5 minutes, use a blotting paper to dry the sections. Examine one using a hand lens  
 (a) Make a well labeled drawing of the section (6mks)

(b) In the table below, state the functions of the parts labeled in (a) above (6mks)

Part labeled	Function

(c) Why were the following procedures done?

(i) Making thin sections (1mk)

.....

(ii) Adding a drop of methylene blue to the sections

.....

(d) Examine the specimen with aid of a hand lens and state the class with a reason

Class: (1mk)

.....

Reason (1mk)

.....

2. You are provided with specimen L, which is a FOOD substance, and the following reagents: M(Iodine solution); N(Benedict's solution); Q(DCPIP) R(1% copper sulphate) and S(10% Sodium hydroxide) carry out tests to determine the food substances in specimen L. record your results in the table below

Food substance being tested for	procedure	Observations	Conclusion
Reducing sugar			
Starch			

Proteins			
Ascorbic acid			

**ANSWERS:**

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