

Name ..... Index Number ..... / .....

231/3  
 BIOLOGY  
 Paper 3  
 (PRACTICAL)  
 Oct./Nov. 2013  
 1¾ hours

Candidate's Signature .....

Date .....

THE KENYA NATIONAL EXAMINATIONS COUNCIL  
 Kenya Certificate of Secondary Education  
 BIOLOGY  
 Paper 3  
 (PRACTICAL)  
 1¾ hours

**Instructions to candidates**

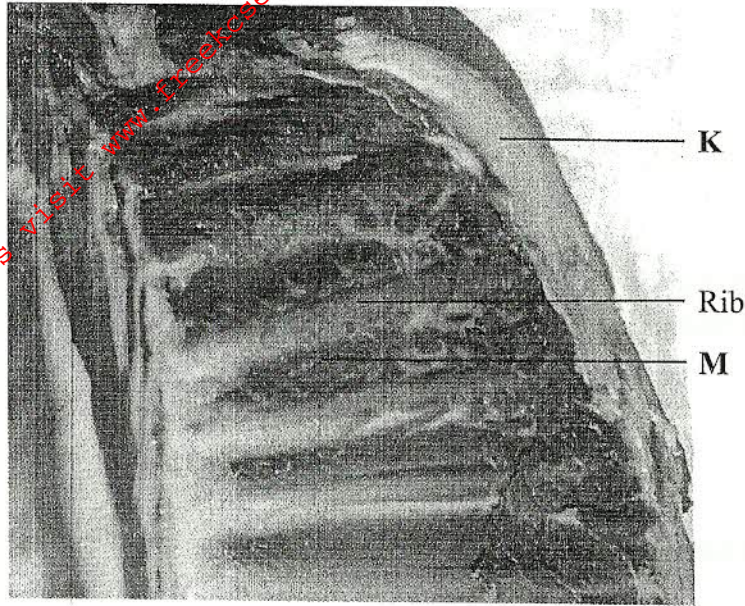
- (a) Write your name and index number in the spaces provided above.  
 (b) Sign and write the date of the examination in the spaces provided above.  
 (c) Answer **all** the questions in the spaces provided.  
 (d) You are required to spend the first 15 minutes of the 1¾ hours allowed for this paper reading the whole paper carefully before commencing your work.  
 (e) Additional pages must **not** be inserted.  
 (f) This paper consists of 7 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's Score
1	18	
2	12	
3	10	
<b>Total Score</b>	40	



1 (a) The photograph below shows the inner surface of the upper left side of the rib cage.



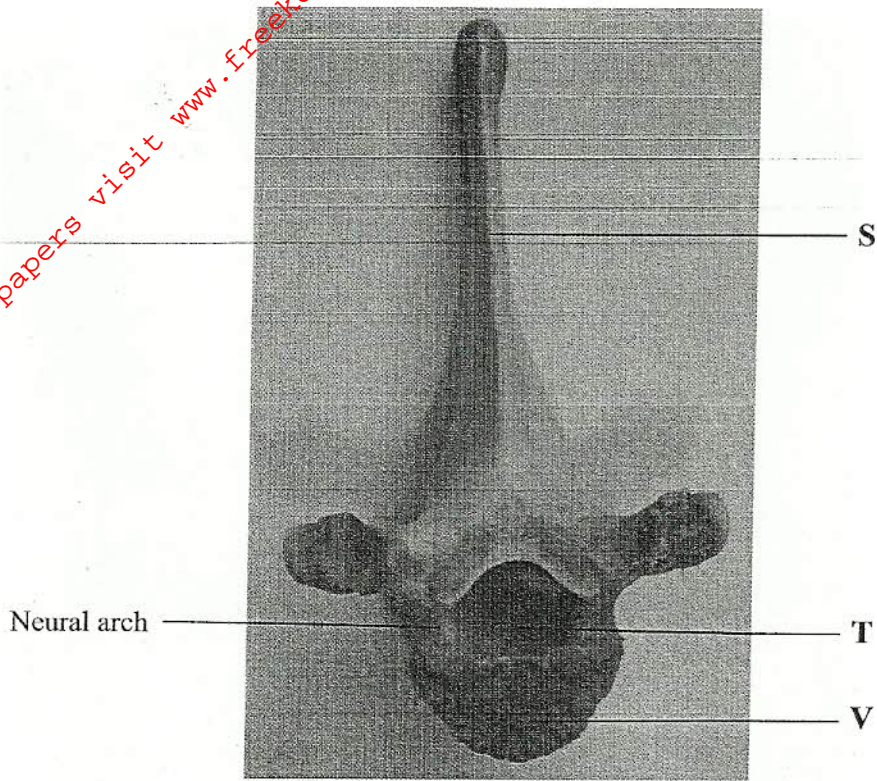
(i) Name the bone covered by the fatty tissue labelled **K**. (1 mark)

.....

(ii) Explain the role of the part labelled **M** in inhalation. (5 marks)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

(b) The photograph below shows a mammalian vertebra.



(i) State the view of the vertebra presented. (1 mark)

.....

(ii) Name and state **one** function of the part labelled T.

Name ..... (1 mark)

Function ..... (1 mark)

(iii) How are the parts labelled S and V adapted to their functions? (4 marks)

S .....

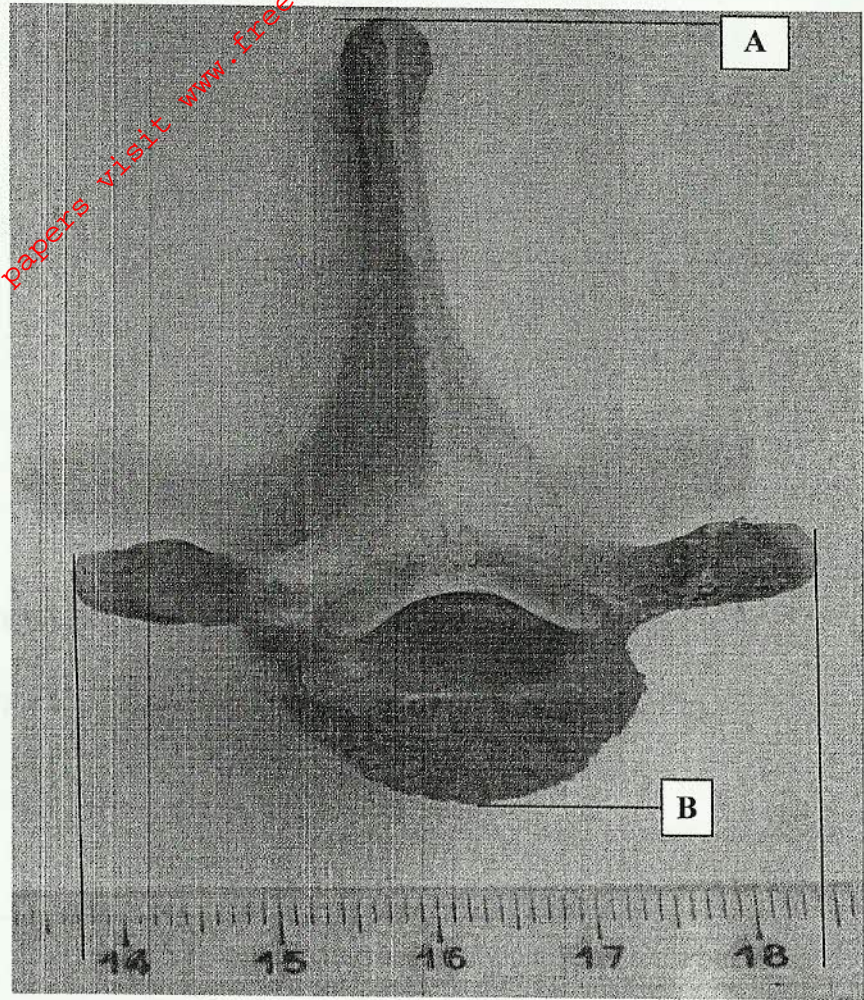
.....

V .....

.....



(c) The actual width of the vertebra below in cm is shown by a section of the ruler in the photograph.



(i) Determine the width of the vertebra on the photograph. (1 mark)

.....

(ii) Calculate the magnification of this image. (2 marks)

.....  
.....

(iii) Determine the actual length of the vertebra from point A to B. Show your working. (2 marks)

.....  
.....



- 2 You are provided with a food sample labelled solution C. Using the reagents provided, carry out tests to identify the food substances present in the sample.

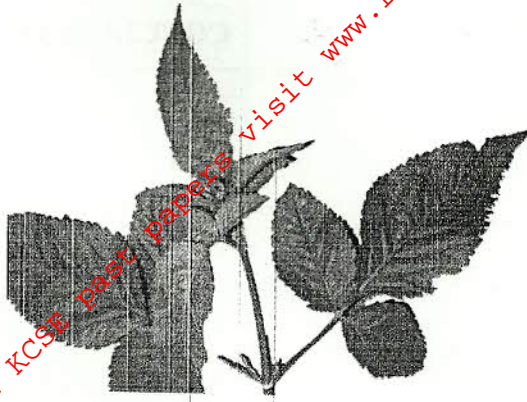
TEST FOR	PROCEDURE	OBSERVATION	CONCLUSION
1. Reducing sugars			
2. Non-reducing sugars			
3. Proteins			

(12 marks)

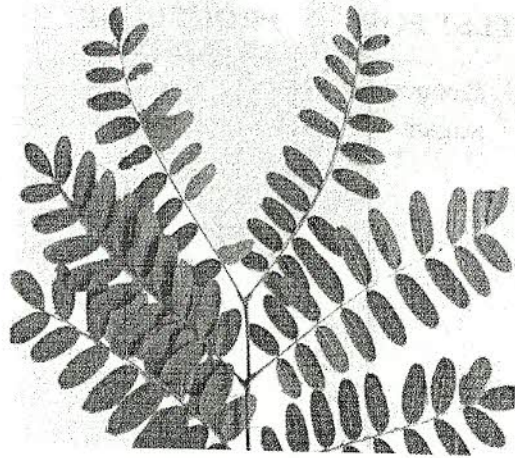


3 Below are photographs showing some observable features of leaves.

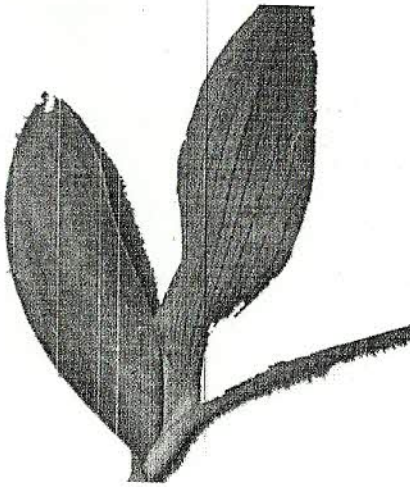
*Compositae*



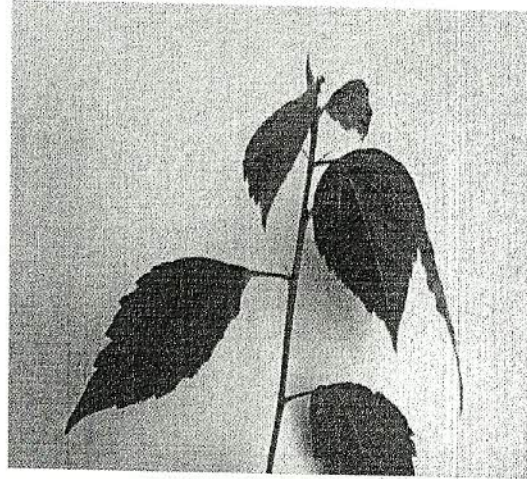
*Papilionaceae*



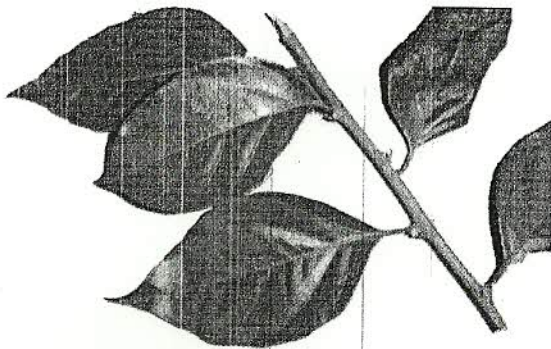
*Commelinaceae*



*Malvaceae*



*Nyctaginaceae*



*Bignoniaceae*



For More Free KCSE Past Papers visit [www.freekcsepapers.com](http://www.freekcsepapers.com)

