NAME……INDEX NO……

SCHOOL…….. DATE……

SIGN…….

231/3
BIOLOGY
PAPER 3
PRACTICAL
JULY/AUGUST 2013
TIME: 1 ¾ HOURS

NAKURU DISTRICT TRIAL EVALUATION TEST 2013

Kenya Certificate of Secondary Education

INSTRUCTIONS TO CANDIDATES

Answer all questions in the spaces provided

FOR EXAMINERS USE ONLY

Question	Maximum score	Candidate 's score
1	12	
2	15	
3	13	
4	40	

1. You are provided with a specimen labeled **P** which is part of the plant

(a) (i) Using external features only, identify the part of the plant (1mark)

……

(ii) Give **TWO** reasons for your answer in (a) (i) above. (2marks)

……

……

(b) Peel off the epidermis from the lower surface of the specimen. Mount a portion of the epidermis in a drop of water on a microscope slide. Stain with methylene blue. Cover with cover slip. Observe the specimen under the high power objective lens and count the number of stomata in the field of view.

Record the number of stomata in the table.

Repeat the counting one more time after moving the slide to another field of view

Record the number of stomata in the second view in the table (2marks)

View	Number of stomata in each view	
	Lower epidermis	Upper epidermis
1		
2		
Average number of stomata		

(c) Repeat the procedure in (b) using the upper epidermis

Record the number of stomata in the table

(d) Record the following from the microscope you used. (1mark)

(i) Magnification of eye piece lens

……

(ii) Magnification of objective lens used (1mark)

……

(iii) Work out the total magnification. Show your working. (1mark)

……

……

……

(e) Account for the average number of stomata on each side of the specimen (4 marks)

Lower epidermis:-

……

……

……

……

……

……

Upper epidermis

……

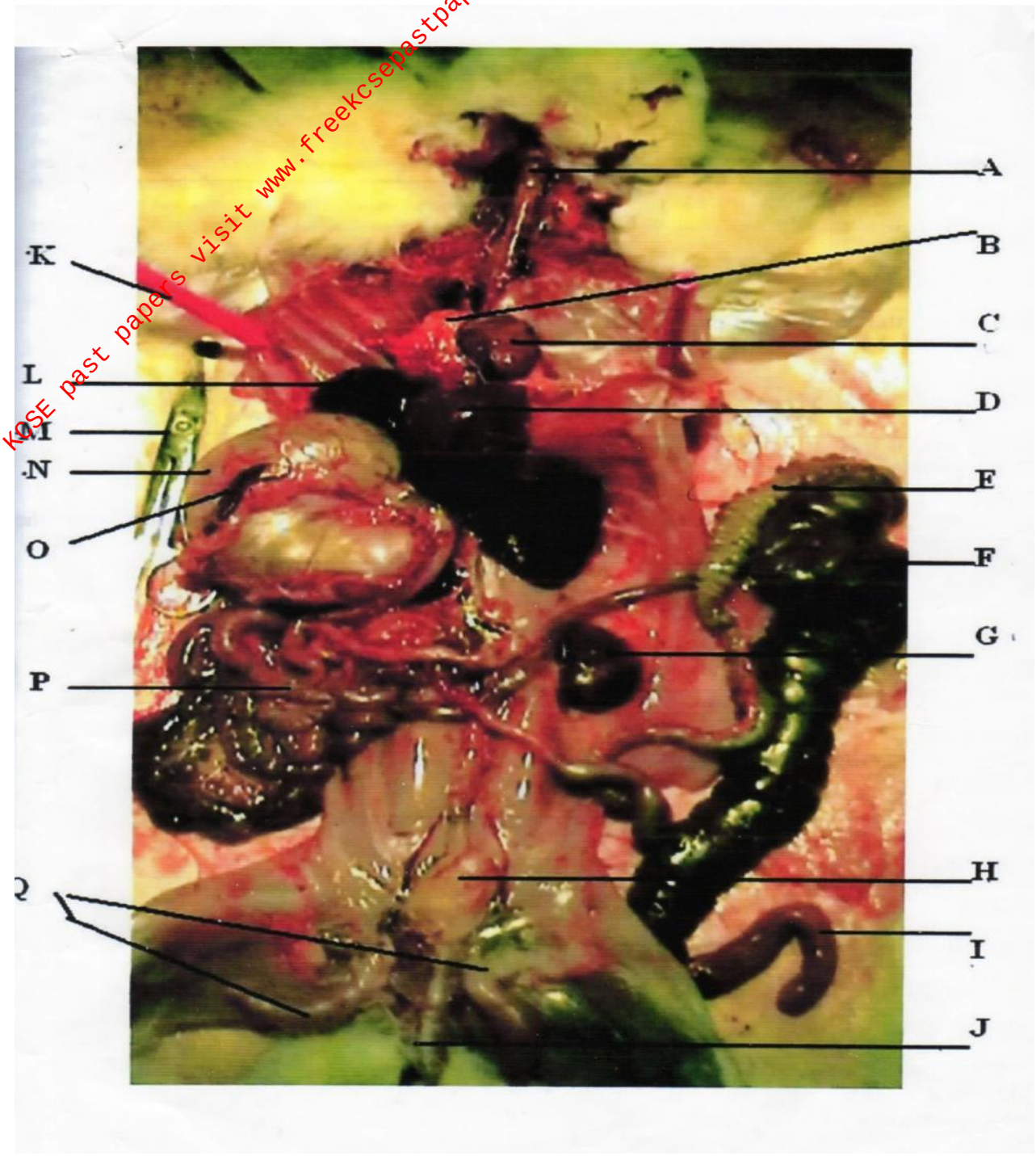
……

……

……

……

……



2. The photograph shown is of a dissected rabbit. Use it to answer the questions that follow.

(a) Identify the parts labelled (5 marks)

A---------- B----------

C…….. N……

I……..

(b) State the function of part **F** (2marks)

……

……

……

c) How is part **P** adapted to its functions? (4marks)

……

……

……

……

……

……

(d) The actual length of apparatus **M** is 100mm. Calculate the magnification of the photograph (2marks)

……

……

……

(e) Name the sex of the animal ……..(1mark)

Reason……..(1mark)

3 You are provided with two lots of wheat grains **B1** and **B2.** Lot **B1** has been kept in a dry condition while **B2** has been kept in a most condition.

(a)(i) Put lot **B1** in mortar and crush with pestle. Divide the product into two portions

Put the first portion on a white tile and add iodine solution

(ii) Put the second portion in a test tube add $1cm^3$ of water followed by $1cm^3$ of Benedict's solution and heat.

Record your observations and conclusion (a)(i) and (ii) in the table below

(b) Repeat the procedure in (a)(i) and (ii) with lot $\mathbf{B_2}$

Record your observations and conclusion in the table (8marks)

Set	Test	Observation	Conclusion
B_1	Iodine		
	Benedict's		
B_2	Iodine		
	Benedict's		

(b) Account for the results obtained in the table (5marks)

B_1 Iodine test:

……

……

……

B_1 Benedict's test:

……

……

……

B_2 Iodine test

……

……

……

……

B_2 Benedict's test

……

……

……

……