

Name .....  
School .....

Index No. ....  
Candidates Sign: .....  
Date: .....

231/3  
**BIOLOGY**  
Paper 3  
PRACTICAL  
July / August – 2008  
**Time: 1 ¾ Hours**

**NYANDO DISTRICT JOINT EVALUATION TEST - 2008**  
*Kenya Certificate of Secondary Education (K.C.S.E)*

231/3  
**BIOLOGY**  
Paper 3  
PRACTICAL  
July / August – 2008  
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**INSTRUCTIONS TO CANDIDATES**

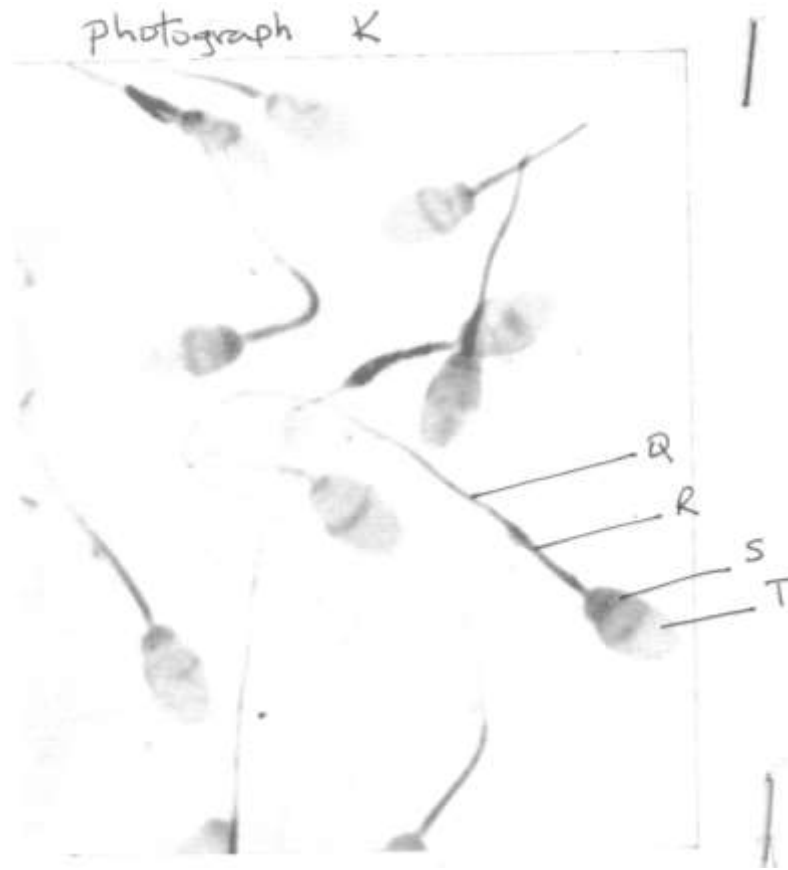
- Answer all the questions
- You are required to spend the first 15 minutes of the 1 ¾ Hours allowed for this paper reading the whole paper carefully before commencing your work.
- Answer must be written in the spaces provided in the question paper.
- Additional pages must not be inserted.

**FOR EXAMINERS USE ONLY**

Question	Maximum Score	Candidate's Score
1	17	
2	10	
3	13	
<b>TOTAL SCORE</b>	<b>40</b>	

*This paper consists of 6 printed pages.  
Candidates should check the question paper to ensure that all the  
Pages are printed as indicated and no questions are missing.*

1. a) Study photograph K and answer questions that follow



Mag x 1900

(i) Identify the structures shown in the photograph.

(1 mk)

.....  
.....

(ii) The photographs were observed using high power objective lens of a microscope. Isolate one structure with labels Q, R, S and T and draw it in the space below making sure you follow all the rules for drawing biology diagrams without changing its size.

(4 mks)

(iii) From the labeled parts, identify which part controls the cell.

(1 mk)

.....  
.....

(iv) Name the part you have identified in a(iii) above.

(1 mk)

.....  
.....

b) (i) Which organelles are abundantly found in part labeled R.

(1 mk)

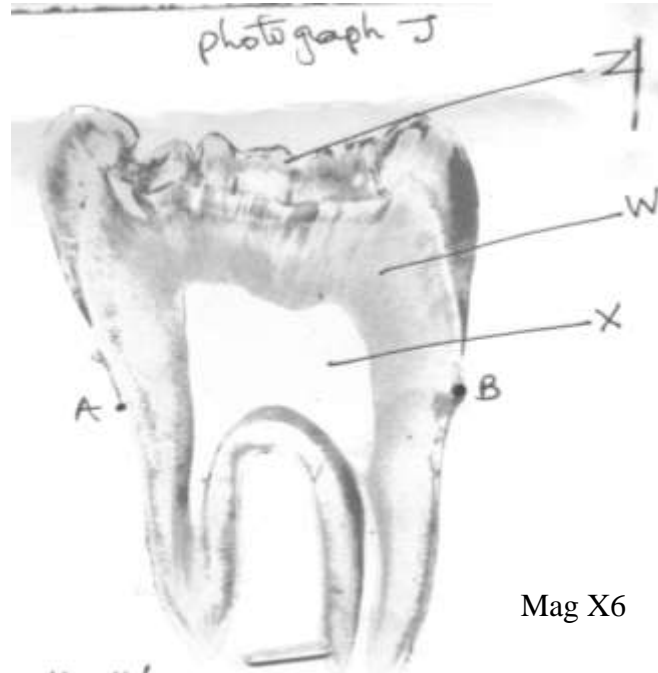
.....  
.....

State the function of these organelles to this cell.

(1 mk)

.....  
.....  
(ii) How would the cell be affected if part labeled Q was removed? (1 mk)

.....  
.....  
c) Below is a photograph labeled J. answer questions that follow it



(i) Using a ruler, measure the distance between point A and point B.  
Distance (cm) (1 mk)

.....  
.....  
(ii) Estimate the actual size of the structure in centimeters. (2 mks)

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.....  
d) (i) Name part labeled W. (1 mk)

.....  
.....  
(ii) How is part labeled Z adapted to perform its function. (2 mks)

.....  
.....  
(iii) Which structure usually occupy space labeled X? (1 mk)

.....  

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17 mks

2. You are provided with a specimen labeled D.
- a) Cut and squeeze the juice from specimen D into a small beaker. Using the reagents provided, test for food substances in the juice. Record the food substance, procedure, observations and conclusions in the table below. (6 mks)

Food substance	Procedure	Observation	Conclusion

b) (i) State the nutritional disadvantage of feeding on food substance D which has been overcooked. (1 mk)

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 .....

(ii) Name the deficiency disease a person is likely to suffer from in feeding on such food b) (i) above. (1 mk)

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 .....

(iii) What is the role of sieve in the experiment? (1 mk)

.....  
 .....

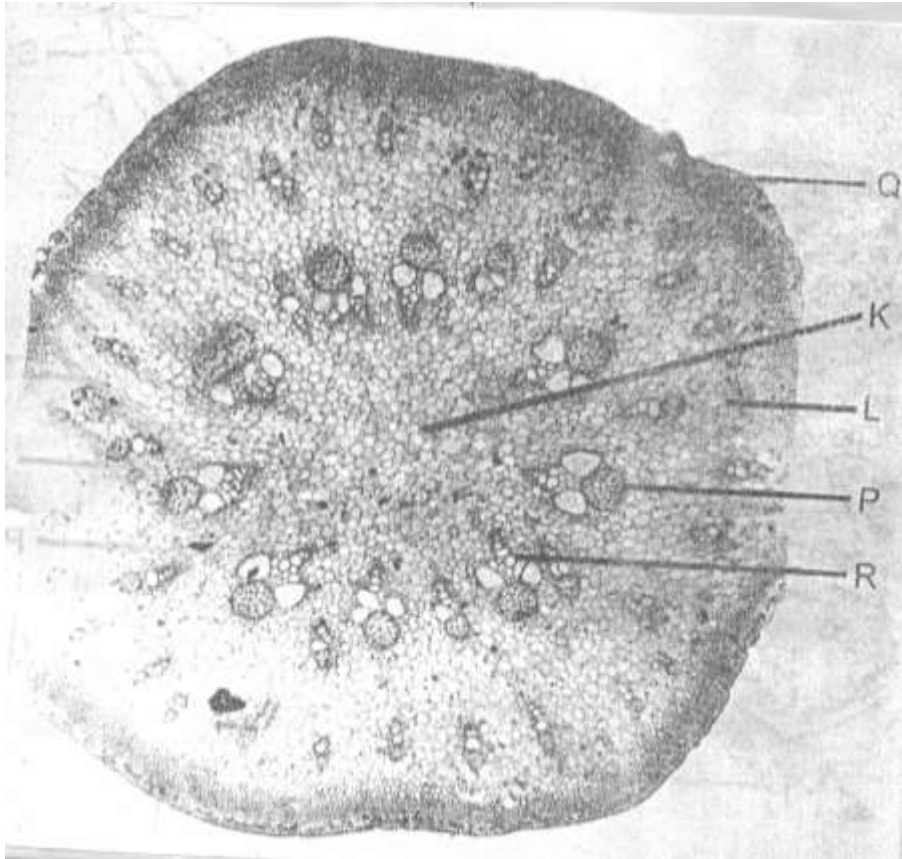
(iv) Name the part of the human alimentary canal that performs the same function as the sieve in the experiment. (1 mk)

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10 mks  
 Turn Over

3. The photograph below shows a transverse section of a young plant root. Examine it carefully.



a) Name the structures labeled K, L and Q. (3 mks)

K

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L

.....  
.....

Q

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.....

b) Identify and state the functions of the parts labeled R and P. (4 mks)

R

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.....

Function

.....  
.....

P

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Function

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c) State the structural differences between the cross section in the photograph and that of a mature root of the same species of plant. (3 mks)

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d) State 3 general functions of roots in a plant. (3 mks)

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13 mks