

NAME:.....ADMNO:.....CLASS.....INDEX.....

DATE:.....

Student's signature.....

231/3
BIOLOGY
PAPER 3
PRACTICAL
MARCH-APRIL 2017
TIME: 2 HOURS

FORM FOUR JOINT EVALUATION EXAM-2017
Kenya Certificate of Secondary Education (K.C.S.E)

232/3
BIOLOGY
PAPER 3
PRACTICAL
MARCH-APRIL 2017

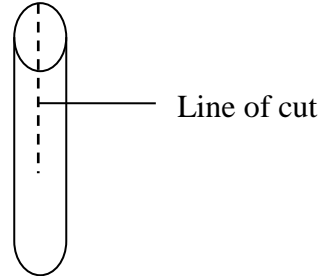
INSTRUCTIONS TO CANDIDATES

- (a) Write your name, class, admission and index number in the spaces provided above.
- (b) Sign and write the date of examination in the spaces provided above.
- (c) Answer **ALL** the questions in the **spaces provided** after each question only.
- (d) You are required to spend the first 15 minutes of the 1 $\frac{3}{4}$ 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.

For examiner use only

Question	Maximum score	Candidate score
1	15	
2	14	
3	11	
Total Score	40	

1. You are provided with two pieces of plant material labeled specimen **Z**.
Using a scalpel cut a slit half way through the middle of each piece as shown in the diagram below.



Place one piece in the solution labeled **X** and the other in solution **Y**.

Allow the set up to stand for 30 minutes.

- (a) After 30 minutes remove the pieces and press each gently between the fingers.

- i. Record your observations.

X.....(1mk)

Y.....(1mk)

- ii. Account for the observations in (a) (i) above. (5mks)

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(b) Examine the pieces.

I. Record other observations beside those made in (a) (i)

above. (2mks)

X.....

.....

Y.....

.....

II. Account for the observations in (b) (i) above. (4mks)

X.....

.....

.....

.....

Y.....

.....

.....

.....

(c) State the significance of the biological process involved in the

experiment in plants. (2mks)

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2.(a) You are provided with solution labeled L. You are also provided with iodine solution, Benedict's solution, DCPIP, 1% copper sulphate and sodium hydroxide. Using the reagents provided, find out the foods contained in solution

L.

(12mks)

Food Substance	Procedure	Observation	Conclusion

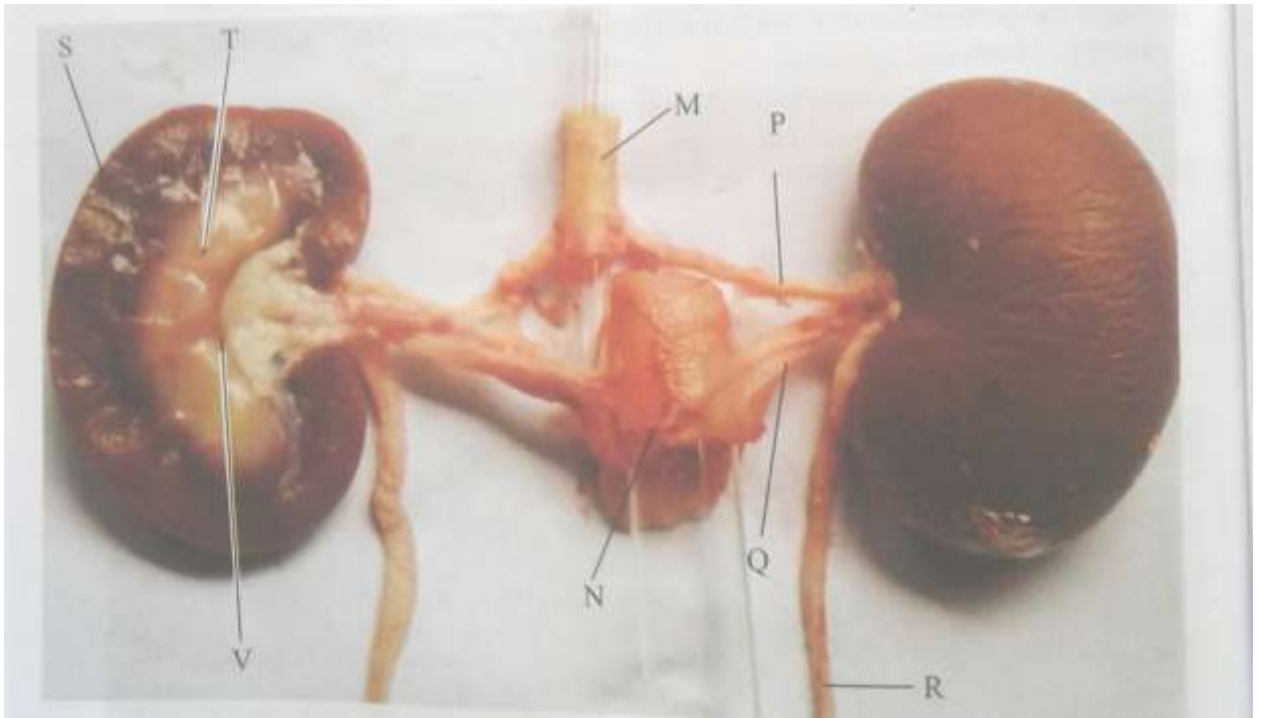
(b) A child was fed on meals containing food substances contained in solution **L** only.

With reasons state the deficiency diseases the child would suffer from. (2mks)

Disease	Reason
i)	
ii)	

3. The photograph below shows a pair of mammalian organs with their blood supply. One of the organs has been sectioned longitudinally.

Examine them.



a) Name the blood vessels M, P and Q (3mks)

M.....

P.....

Q.....

b) Which of the blood vessels P and Q carries Blood with a higher concentration of urea? Give a reason for your answer.

(2mks)

Blood vessel

Reason

.....

c) Name the structure labeled R and state its function. (2mks)

Structure:

.....

Function:

.....

.....

d) Name the parts labeled T and V (2mks)

T.....

V.....

e) Name two parts of the nephron found in part labeled S. (2mks)

i).....

ii).....