Biology Paper 3(231/3)

Name
index Number
Candidate's Signature Date

THE KENYA NATIONAL EXAMINATIONS COUNCIL Kenya Certificate of Secondary Education BIOLOGY Paper 3
(PRACTICAL)
1^ hours
INSTRUCTIONS TO CANDIDATES

Write your name and index number in the spaces provided al the top of this page. Sign and write the date of examination in the spaces provided above,
Answer ALL the questions.
You are required to spend the first 15 minutes of the 1 $ hours allowed for this paper reading the whole paper carefully before commencing your work.
Answers must be written in the spaces provided in the question paper.
Additional pages must **not** be inserted.
For Examiner's Use Only

Question	Maximum Score	Candidate's Score
i	15	
2	13	
3	12 [1]	
Total Score	40	

This paper consists of 6 printed pages

Candidates should check the question paper to ascertain that all the pages are printed as indicated and no questions are missing.

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231/3
BIOLOGY Paper 3
(PRACTICAL) Oct./Nov. 2007
1 4 hours
251

Below are photographs labelled P, Q, R, S, T, U and V of twigs obtained from plants. Examine them.

observable features in the photographs, complete the dichotomous key given below.

1 a Simple leaves
b Compound leaves

2 a Leaves net-veined
b Leaves parallel-veined

3 a
b Leaves with smooth margin

4 a Leaves alternate
b
5 a
b Leaves bipinnate

6 a Leaflets with serrated margin
b Leaflets with smooth margin
go to 2 go to 5

go to 3
Commelinaceae go to 4

Nyetaginaeeae

Malvaceae
Verbenaeeae

go to 6 Bignoniaceae

Compositae
Papilionaceae

(3 marks)

Use the completed dichotomous key to identify the family to which each plant belongs. In each case show the steps you followed to arrive at the identity.
(12 marks)

Identity	Steps followed
P	
Q	
R	
S	
T	
U	
V	

You are provided with solutions labelled P, Q, S and a filter paper. The solution labelled P will be used in parts (a), (b) and (c).
Solution Q is iodine solution.

(a) Use the iodine solution to lest for (he presence of the food substance in solution P.

Food substance	(1 mark)
Procedure	(1 mark)
Observation	(1 mark)
Conclusion	(1 mark)

Solution S is Benedict's soluti
ion.
ibl
(C)
Use the Benedict's solution to test for the presence of the food substance in solution P.

Food substance

Procedure

Observation

Conclusion

Using the filter paper provided, test for the presence of lipids in solution **P.**

Procedure

Observation

Conclusion

(1 mark) (2 marks) (1 mark) (1 mark)

(2 marks) (1 mark) (1 mark)

3 Below are photographs labelled J and K of organs obtained from different animals. The organs perform similar functions. Examine them.

Part labelled W enlarged
Photograph J
2 1

Photograph K

254

(a) Identify the organs.

J

K
(2 marks)

(b) State the function performed by the organs.

(c) Name the parts labelled **X, Y** and **Z** in photograph 1

X

Y

Z

(d) (i) Identify the parts labelled 1,2 and 3 in photograph K. (3 marks)

1 .

2

1

(ii) Using observable features, state how the parts labelled 1 and 3 you identified in (d) (i) above are adapted to their functions. (4 marks)
(1 mark)

(3 marks)