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553/2
BIOLOGY
(Practical)
Paper 2
25th July 2014
2 hours

ENTEBBE JOINT EXAMINATION BUREAU

Uganda Certificate of Education

BIOLOGY

PRACTICAL PAPER

Paper 2

2 hours

INSTRUCTIONS TO CANDIDATES:

Attempt all questions in the spaces provided.

Clean and clear drawings should be made in the spaces provided

Coloured pencils or crayons should not be used.

FOR EXAMINERS'USE ONLY	
Questions	marks
Q1	
Q2.	
Q3.	
TOTAL	

O-B-2

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Bureau: Biology

1. You are provided with solutions *A*, *B*, *C*, *D* and *E* which are plant extracts.

- (a) Place 2cm³ of DCPIP in five test tubes.
- (b) Using a dropper, add solution *A* to DCPIP in the test tube(s). Record the number of drops used to decolourise DCPIP.
- (c) Repeat the procedures (a) - (c) for solutions *B*, *C*, *D* and *E*.

Results

Solution	Number of drops used to decolourised DCPIP
A	
B	
C	
D	
E	

(05 marks)

(ii) What food nutrient is being tested?

(01 mark)

(iii) Arrange the solutions in the ascending order of concentration of the food nutrient above. (05 marks)

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.....
.....

Turn Over

(iv) Outline the uses of the food nutrient in (i) above.
downloaded from www.brainshareonline.com

(v) State two sources of the food nutrient identified above.

(02 marks)

(d) Boil 2cm³ of solution C in a test tube for one minute. Add the boiled solution C to 2cm³ of DCPIP in a test tube.

(i) Record the number of drops used to decolourise DCPIP.

(ii) Explain your answer. (03 marks)

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(iii) How would you advise people who feed on the food nutrient being tested?

(01 mark)

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.....

(e) To 1 cm³ of solution D in a test tube, add 1cm³ of Benedict's solution and boil.

(i) State what was observed. (4 1/2 marks)

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

Specimen	Presence of parachute (persistent calyx)	Number of seeds	Number of sutures
K			
L			
M			
N			

(ii) What is your conclusion? (1/2 mark;

.....

2. You are provided with specimens *K*, *L*, *M* and *N*.

(a) Identify each of the specimens. (04 marks)

K

L

M

N

(b) (i) Cut each of the specimens *K*, *L*, *M* and *N* transversely.
 Observe and record in the table below.

(ii) Using the features above, construct a dichotomous key to identify the specimens.
 (06 marks)

(c) Describe the mode of dispersal of specimen *L*. (02 marks)

(d) Observe the transverse section of specimen *M*. Draw and label.
State your magnification. (06 marks)

3. You are provided with specimens *P* and *Q*.

(a) State the phylum to which both specimens belong. Give reasons for your answer.
(04 marks)

.....

(b) State the class to which specimen *Q* belongs. Give a reason for your answer.
(04 marks)

(c) State four structural differences between *P* and *Q*. (04 marks)

Specimen P	Specimen Q

(d) Remove wings from specimen **Q**. Cut off the abdomen. Draw and label the abdomen.
(05 marks)