

553/2
BIOLOGY
PRACTICAL
Paper 2
July 2018
2 hours



ACEITEKA JOINT MOCK EXAMINATIONS 2018
UGANDA CERTIFICATE OF EDUCATION
BIOLOGY PRACTICAL

Paper 2
2 HOURS

INSTRUCTIONS TO CANDIDATES:

*This paper consists of **three** questions.*

*Answer **all** questions.*

Drawings should be made in the spaces provided.

*Use **sharp pencils** for your drawings.*

*Coloured pencils or crayons should **not** be used.*

No additional sheets of paper are to be inserted in this booklet.

*Work on additional sheets will **not** be marked.*

For Examiners' Use Only		
Question	Marks	Examiner's signature and number
1		
2		
3		
Total		

1. You are provided with specimen **W** and **X**, and solutions **P** which is a common laboratory reagent and distilled water. You are to carry out tests on specimen **W** and **X**, using solution **P** to investigate action of contents of specimen **W** and **X** on solution **P**.
- (a) Label four test tubes as **A**, **B**, **C** and **D**. Add solution **P** and distilled water test tubes **A**, **B**, **C** and **D** as instructed in table 1.

Table 1

Test tube	Add Solution P	And add distilled water
A	3cm ³	0
B	1 cm ³	2 cm ³
C	0	3 cm ³
D	3 cm ³	0

- Cut 6 cubes from specimen **W** each of dimensions 1cm x 1cm. Also cut 2 cubes from specimen **X** each of dimensions 1cm x 1 cm x 1cm.
- Carry out the tests in table 2, record all your observations and deductions in table 2.

Table 2

Test	Observations	Deductions
(i) To test tube A , add 2 cubes from specimen W		
(ii) To test tube B , add 2 cubes from specimen W		
(iii) To test tube C , add 2 cubes from specimen W		

(iv) To test tube D , add 2 cubes from specimen X		

(b) Explain the results obtained in test tube **A**, **B**, and **C**. (06 marks)

(i) Test tube **A**

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

(ii) Test tube **B**

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

(iii) Test tube **C**

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

(c) Explain the difference between results obtained in test tube **A** and **D**. (03 marks)

.....
.....

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

2. You are provided with Specimen **M** and **N** which are animal parts.

(a) (i) Describe the structure of specimen **M**. (03 marks)

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

(ii) Describe the airtight structure of Specimen **N**. (03 marks)

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

(b) From the structure described in (a), explain how each specimen is adapted for its function. (04 marks)

(i) Specimen **M**

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

(ii) Specimen **N** (04 marks)

.....
.....

.....
.....

(c) Put specimen **N** under water in a beaker then remove and shake it.

(i) Record your results. (01 marks)

.....
.....

(ii) What is the importance of the results in c (i)? (02 marks)

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

(d) In the space below, draw and label the airtight structure of specimen **N**. (05 marks)

3. You are provided with specimen **P**, **Q**, **R** and **S**, which are parts of different plants. Cut specimen **Q** longitudinally. Examine the specimens as you answer the following questions.

(a) Examine the leaves on specimen **P**, and state the class of plants from which specimen **P**, was obtained. Give two reasons for the class stated. (2 marks)

(i) Class

.....

(ii) Reason

.....

.....

.....

(b) Examine specimen **R**, and explain how the specimen adapts the plant to survive on land. (03 marks)

.....

.....

.....

.....

.....

.....

- (c) Examine the leaves of specimen **S** and the inner leaves of specimen **Q**. Give three differences between specimen **S** and specimen **Q**, basing on their leaves, in table 3. (03 marks)

Table 3

Specimen S	Specimen Q

- (d) (i) Examine the stem of specimen **P, Q, R** and **S**, and state three descriptive features of the stems in table 4. (Don't consider leaves)

Table 4

Specimen	Descriptive feature
P	
Q	
R	
S	

- (ii) From the descriptive features stated in table 4, construct a dichotomous key for identifying specimens **P, Q, R**, and **S** (03 marks)

.....

.....

.....

.....

.....

.....

.....

.....

(e) Draw and label the lamina of a leaf of specimen **S**

(05 marks)

END