CANDIDATE'S NAME: ……………………………………………………………

Signature …………………………………….. Centre/Index No. …………………

P530/3
BIOLOGY
PRACTICAL
PAPER 3
JULY/AUGUST 2019
3¼ HOURS

ASSHU MID-WESTERN REGIONAL JOINT MOCK EXAMINATIONS 2019

UGANDA ADVANCED CERTIFICATE OF EDUCATION

P530/3
BIOLOGY
PRACTICAL
PAPER 3
3 hours 15 minutes

INSTRUCTIONS TO CANDIDATES

- This paper consists of **THREE** questions
- Answer **ALL** questions
- Write the answers in the spaces provided. Additional sheets of paper must not be inserted in this booklet.
- You are **not** allowed to start working within the first 15 minutes. You are advised to use this time to read through the paper and ensure that you have all the apparatus, chemicals and specimens you require.

FOR EXAMINERS' USE ONLY		
Question	Marks	Examiner's Signature & Number.
1		
2		
3		
TOTAL		

1. You are provided with specimen T, which is freshly killed.

a) Place the specimen dorsal side uppermost. How are the following features significant in the life of the animal in its habitat?

(06 marks)

i) Head structure

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ii) Fore limbs structure

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iii) Fore limbs location

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b) Open the mouth of the specimen using forceps and examine the roof of the buccal cavity.

i) Draw and label its observable features. (06 marks)

ii) Using any four observable features in (b) (i), explain how each of them enables the animal to survive in its habitat. (04 marks)

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c) Dissect the specimen to display internal structures. Continue to
i) expose vessels that supply blood to the head region from the heart,

ii) displace the alimentary canal gently to the left, with organs anterior to it undisplaced, to expose vessels that drain blood from its originally left structures and organs beneath, back to the heart.
Draw and label your dissection. (24 marks)

2. You are provided with solution A, B, P, Q and R.

a) Carryout Benedict's and Biuret tests on solutions A and B.

[redacted]

~~iii) Extract C~~

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e) Explain the effects of the following solutions on solution B.

i) Solution Q (02 marks)

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ii) Solution P

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iii) Extract C

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f) From the results of the experiment, suggest with reasons, the nature of

i) Solution A (04 marks)

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ii) Solution B

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3. You are provided with specimens L, M, N, X and Y which are reproductive structures of plants.

a) Describe the pattern of floret arrangement in

i) Specimen N (06 marks)

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ii) Specimen X

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b) Carefully remove other floral parts and expose the gynoecium of specimen L and M. Observe using a hand lens. State the differences between the structure of gynoecium of L and M. (03 marks)

L	M
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c) Cut off one stigma and one anther from specimen M. Put then on a slide and observe under low power of a microscope.

i) Describe how the stigma of specimen M is adapted for its mode of pollination. (03 marks)

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ii) Describe how the anther of specimen M is adapted for its mode of pollination. (03 marks)

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iii) Draw and label the observed structures of the anther. (03 marks)

iv) Cut a thin cross-section through the ovary of specimen M. Observe it under low power of a microscope.
Describe its internal structure. (03 marks)

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d) Observe one inner mature floret of specimen N and one unit of specimen Y, under low power of a microscope.

i) Draw and label one inner floret of specimen N. (07 marks)

ii) State the structures of specimen N that develop into specimen Y. (02 marks)

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iii) How is specimen Y adapted for its dispersal from the parent plant? (01 mark)

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END