Name…….

Signature ……..……...

P530/3
BIOLOGY
(Practical)
PAPER 3
MARCH 2024
3 hours

JINJA PROGRESSIVE SECONDARY SCHOOL-JIPRA

Uganda Advanced Certificate of Education

BIOLOGY PRACTICAL TEST SET I TERM ONE 2024

Paper 3

3 hours 15 minutes

INSTRUCTIONS TO CANDIDATES:

- *This paper consists of* **three** *questions.*
- *Answer* **all** *questions.*
- *Answers must be written in the spaces provided.*
- *Additional sheets of paper must* **not** *be inserted in this booklet.*

FOR EXAMINER'S USE ONLY		
Question	**Marks**	**Examiner's signature**
1		
2		
3		
Total		

Turn Over

1. You are provided with specimen **G** which is freshly killed.

(a) (i) Examine the hind limbs of the specimen and explain how they enable the organism to survive in its environment (04marks)

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(b) Pin the specimen with the ventral side uppermost. Dissect the specimen to display the muscles of the left thigh.

(i) Examine the upper muscle block on the outer part of the left thigh up to its attachment.
Describe the structural efficiency of the muscle to its function. (03marks)

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(ii) Draw and label the muscle of the left thigh. (07marks)

(c) By further dissection, display the blood vessels that;

i) Carry blood to structures responsible for removal of metabolic wastes from the body, hind limbs and temporal food storage.

ii) Drain blood from upper trunk region except the skin.

iii) Draw and label the structures displayed in (i) and (ii) above on the same drawing to include the heart in ventral view. (26marks)

2. You are provided with solutions **A, B, M** and active ingredient **N**.

a) Carry out the following tests to identify the solutions. Record your tests, observations and deductions in the table below; (16marks)

TABLE 1

Tests	Observations	Dedications
(i) Iodine test	A-	
	B-	
Non reducing sugar test	A-	
	B-	
(ii) To $1cm^3$ of M, add $0.5cm^3$ of lab chemical X		

(iii) To 1cm^3 of M, add 0.5cm^3 of lab chemical Y		

b). Label two test tubes **A,B** and to each, add 2cm^3 of the respective solution followed by half spatula endful of active ingredient **N**. Cover the tubes tightly with a cork and incubate for 20minutes in water bath at 37- 40^{0C}. After 20 minutes, filter each mixture into test tubes labelled **A_1** and **B_1**.

04marks

Table 2

Tube	Observation	Deductions
A_1+iodine solution		
A_1+ reducing sugar test		
B+ non reducing sugar test		
B+ reducing sugar test		

Explain the results in

(i) TABLE 1 ABOVE

M+X (04marks)

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M+Y

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(ii) TABLE 2 ABOVE

A+ IODINE (02marks)

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B+ Reducing sugar test (02marks)

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(c) Suggest the purpose of covering tubes A and B tightly with cork. (02marks)

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3. You are provided with specimen **Q, R** and **S**.

Examine the specimens **R** and **S** using a hand lens and answer the questions that follow.

a) Describe the arrangement of the florets of specimens;

(i) R (3marks)

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(ii) S (3marks)

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b) Open and observe one floret of specimen **Q** with a hand lens and State **three** descriptive features of parts of the floret : (6marks)

(i) Androecium

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(ii)Gynoecium……

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(c) Make a longitudinal section through specimen **R** and make a slice from one side of the longitudinal section . Observe one slice of the specimen under medium power of a microscope

(i) Describe the structures observed (03marks)

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(ii) Draw and label the structures observed (07marks)

(d) Identify the type of pollinating agent of specimen R and explain how it is well adapted for the agent mentioned.

(4marks)

Type of agent

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Adaptations

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(e) Outline the structural difference between the florets of specimen Q and R (04marksa)

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END