(c).Draw and label the androecium of specimens E4 and E2. **(06 marks)**

(d).With a reason, state the mode of pollination for specimen E4. **(02 marks)**

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(e).Explain how pollination is facilitated by the androecium of specimen E3. **(04 marks)**

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END

P530/3.

BIOLOGY

PAPER 3

PRACTICAL

MOCK 2024

AUGUST

3 HOURS: 15 MINUTES

MEBU EXAMINATIONS CONSULT

UGANDA ADVANCED CERTIFICATE OF EDUCATION

MOCK EXAMINATIONS 2024

BIOLOGY

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. **No** additional sheets of paper must be inserted in this booklet.
- ✓ You are **not** allowed to start working within the first **15 minutes** and ensure that you have all the apparatus, chemicals and specimens you may require.

FOR EXAMINERS' USE ONLY		
QUESTIONS	**MARKS**	**Examiner's Initials**
1		
2		
3		
TOTAL		

1. You are provided with freshly killed mammal labelled W.

(a).Using a hand lens, observe the dorsal view of the head of the specimen.

(i).Draw and label the dorsal side of the head of specimen W to show the structures for sensitivity. **(05$\frac{1}{2}$ marks)**

(ii).Examine the **otic pavilions** of specimen W and describe how they are adapted to perform their function hence describe their structure. **(05 marks)**

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Flower of E3		

(b).Using the characteristics of the androecium and gynoecium, construct a dichotomous key to identify the specimens. **(04 marks)**

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E1		
Flower of E5		

(b) .Dissect specimen W to expose the structures for ventilation and blood circulation in the regions anterior to the diaphragm with the heart and the left lung displaced to your left. **(25 marks).**

(c).By further dissection, open the neck region of specimen **W**.Draw and label the superficial structures. **(07 marks)**

(d).Examine the entire body of specimen **W** and outline any two structural adaptations it has to overcome dessication. **(02$\frac{1}{2}$marks)**

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2. You are provided with solutions T and N that contain food nutrients and solutions G and R.

(a).Identify the food nutrients present in solutions T and N using the reagents provided. Record your procedure, observations and conclusions in the table below. **(21 marks)**

(a).Describe the androecium and gynoecium of each of the specimens, E4, E2 and E1 and of one flower from each specimens E5 and E3. **(15 marks)**

Specimens	Characteristics Of Androecium	Characteristics Of Gynoecium
E4		
E2		

	BUIRET'S TEST		

(iii).From your results, state any two properties of the active substance in solution **Q.**

(**02 marks)**

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(c).Explain the results obtained in (b) (i) and (ii) above. **(07 marks)**

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3. You are provided with specimens E1, E2, E3, E4, and E5 which are flowers and inflorescences.

PROCEDURE	OBSERVATIONS		CONCLUSIONS	
	T	N	T	N
BENEDICT'S TEST				
BUIRET'S TEST				
IODINE TEST				

(b).Extract a piece of the stomach of specimen W measuring about 2.0cm. Open it and pour out the contents, wash and grind it using a pestle and a mortar. Add $8cm^3$ of distilled water. Leave the solution to settle and then decant. Label the extracted solution as **Q**. Obtain four test tubes and label them **A**,**B**,**C** and **D** and add components to each test tube as shown below:

TEST TUBE	PROCEDURE
A	$3cm^3$ of **N** and $2cm^3$ of **G**
B	$3cm^3$ of **N** and $2cm^3$ of **R**
C	$3cm^3$ of **T** and $2cm^3$ of **G**
D	$3cm^3$ of **T** and $2cm^3$ of **R**

Divide the extracted solution Q into four equal parts and add each part into the test tubes A, B, C and D. Incubate the test tube contents at a temperature between 37^0C 40^0C for 3,000 seconds.

(i) .Observe test tubes A and B and record your observations and conclusions in the table below. **(04 marks)**

TEST TUBE	OBSERVATIONS	CONCLUSIONS
A		
B		

(ii).Using the reagents provided, carry out the tests below on the food nutrients present in test tubes C and D. Record your observations and conclusions in the table below.

(14 marks)

TEST TUBE	TESTS	OBSERVATIONS	CONCLUSIONS
C	**IODINE TEST**		
	BENEDICT'S TEST		
	BUIRET'S TEST		
D	**IODINE TEST**		
	BENEDICT'S TEST		