

# MASENO SCHOOL

JULY/AUGUST MOCK - 2024

231/3 BIOLOGY Paper 3 (Practical)



Name ..... Index Number.....

Class ..... Date ..... Signature.....

## INSTRUCTIONS TO CANDIDATES

- (i) Write your name and index number in the spaces provided at the top of this page.
- (ii) Answer **all** questions.
- (iii) You are required to spend the first 15 minutes of the 1  $\frac{3}{4}$  hours allowed for this paper reading the whole paper carefully before commencing your work.
- (iv) Answers must be written in the spaces provided in the question paper. Additional pages must not be inserted.
- (v) The paper consists of 7 printed pages.
- (vi) Candidates should check to ascertain that all the pages are printed as indicated and that no questions are missing
- (vii) Candidates **MUST** answer the questions in English
- (viii) Candidate may be penalized for recording irrelevant information and for incorrect spelling especially of technical terms

### For Examiners Use Only

Question	Maximum Score	Candidate's Score
1	14	
2	13	
3	13	
<b>Total score</b>	<b>40</b>	

1. You are provided with the following;

- Solution labeled **R**
- 0.1% sodium chloride solution
- Benedict's solution
- Iodine solution
- Solution **K**
- White tile
- One boiling tube
- Test-tube holder

- a) Place two drops of solution **R** on a white tile and add two drops of iodine solution. Record your observation and conclusion (2 marks)

Observation	Conclusion

- b) Place 2.0 ml of solution **R** into a boiling-tube. Add two drops of iodine solution followed by 2.0 ml of solution **K** and one drop of 0.1% sodium chloride solution. Place the test-tube in a water bath maintained at 80°C for **ten minutes**. Observe and fill the table below. Preserve the boiling-tube and its content for use in the succeeding question. (3 marks)

Boiling -tube content	Observation	Conclusion



- c) To the content of the boiling-tube, add 2.0 ml of Benedict's solution and place it in water bath maintained at 80<sup>0</sup>C for **10 minutes**. Observe and fill the table below (3 marks)

Boiling -tube content	Observation	Conclusion

- d) Account for your observation in 1(b) and 1(c)

- i) 1 (b) (3 marks)

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- ii) 1(c) (2 marks)

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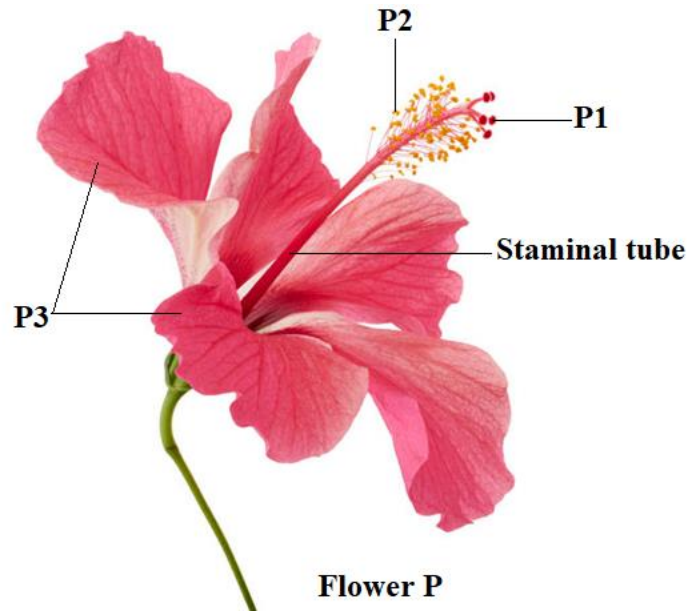
- e) State the role of sodium chloride in the experiment (1 mark)

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2. The diagrams P, Q and R below shows flowers. Flowers Q and R were obtained from the same plant.



Flower Q



Flower R

a) With reasons based on observable features only, identify the agents of pollination of the flowers P, R and Q (4 marks)

Flower	Agent	Reason
P		
Q and R		

b) Identify the parts labeled P1 and P2 in flower P

P1..... (1 mark)

P2..... (1 mark)

c) Give a reason why self-pollination and self-fertilization should be discouraged in plants

(1 mark)

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d) Give two observable features that hinder self-pollination and self-fertilization in flower P

(2 marks)

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e) Identify the class to which the plant from which flower P was obtained belongs. Give a reason for your answer

i) Class (1 mark)

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ii) Reason (1 mark)

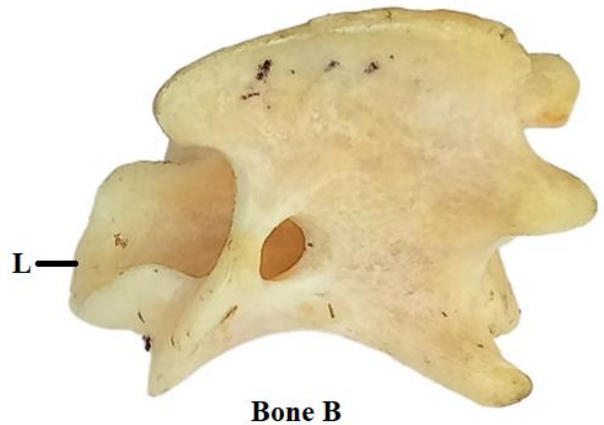
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f) Give the difference in size and texture of pollen grains produced by flowers P and R (2 marks)

	P	R
Size		
Texture		



3. The photographs below show bones obtained from the same animal. Examine them



a) Identify the bones A and B

A..... (1 mark)

B..... (1 mark)

b) Name the region of the body where the above bones were obtained (1 mark)

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c) Give two reasons for your answer in (b) above (2 marks)

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d) Explain the role of part marked L in bone B (3 marks)

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e) State two differences between bones A and B (1 mark)

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f) Name the bone that precedes bone A in axial skeleton (1 mark)

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g) Explain the role of the above bones in respiration (2 marks)

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