



# MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education  
PRE-MOCK EXAMINATIONS 2022

231/3

BIOLOGY

Paper 3

JUNE

2022

–

1<sup>3</sup>/<sub>4</sub> Hours

Name: ..... Adm No: .....

Class: ..... Candidate's Signature: ..... Date: ...../6/2022.

## INSTRUCTIONS TO CANDIDATES:

- Write your *name* and *admission number* in the spaces provided.
- Sign and write *date* of examination in the spaces provided above
- Answer *all* the questions in this paper.
- You are required to spend the first 15 minutes of the 1<sup>3</sup>/<sub>4</sub> hours allowed for this paper reading the whole paper carefully.

## For Examiner's Use Only:

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1	14	
2	12	
3	14	
<b>TOTAL</b>	<b>40</b>	

1. You are provided with olive oil, liquids labeled  $L_1$  and  $L_2$ , and an Irish potato. Label test tubes A and B. Place  $2\text{cm}^3$  of water into each test tube. Add 8 drops of olive oil into each test tube. To test tube A, add 8 drops of liquid L. Shake both test tubes. Allow to stand for 2 minutes.

(a)

(i) Record your observations made in the test tubes A and test tube B

Test Tube A

(1 mark)

---

Test Tube B

(1 mark)

---

(ii) Name the process that has taken place in test tube A

(1 mark)

---

(iii) State the significance of the process named in (a) above

(1 mark)

---

(iv) Name the digestive juice in humans that has the same effect on oil as liquid  $L_1$

(1 mark)

---

(v) Name the region of the alimentary canal into which the juice is secrete

(1 mark)

---

(b)

(i) Label two test tubes C and D place  $2\text{cm}^3$  of liquid  $L_2$  into each test tube. Add a drop of iodine solution into each test tube.

Record your observations.

(1 mark)

---



---

(ii) Suggest the identity of  $L_2$

(1 mark)

---

(iii) Cut a cube whose sides are  $1\text{ cm}^3$  from the Irish potato. Crush the cube to obtain a paste. Place the paste into a test tube labeled C. add  $2\text{ cm}^3$  of amylase solution. Leave the set up for at least 30 minutes.

(i) Record your observations (1mark)

C \_\_\_\_\_

(iv) Account for the result in (b)(iii) above (2marks)

\_\_\_\_\_  
\_\_\_\_\_

(iv) Cut another cube whose sides are 1 cm from the Irish potato. Crush the cube. Place the crushed paste into a test tube. Carry out food test with reagents provided. Record your procedure and results.

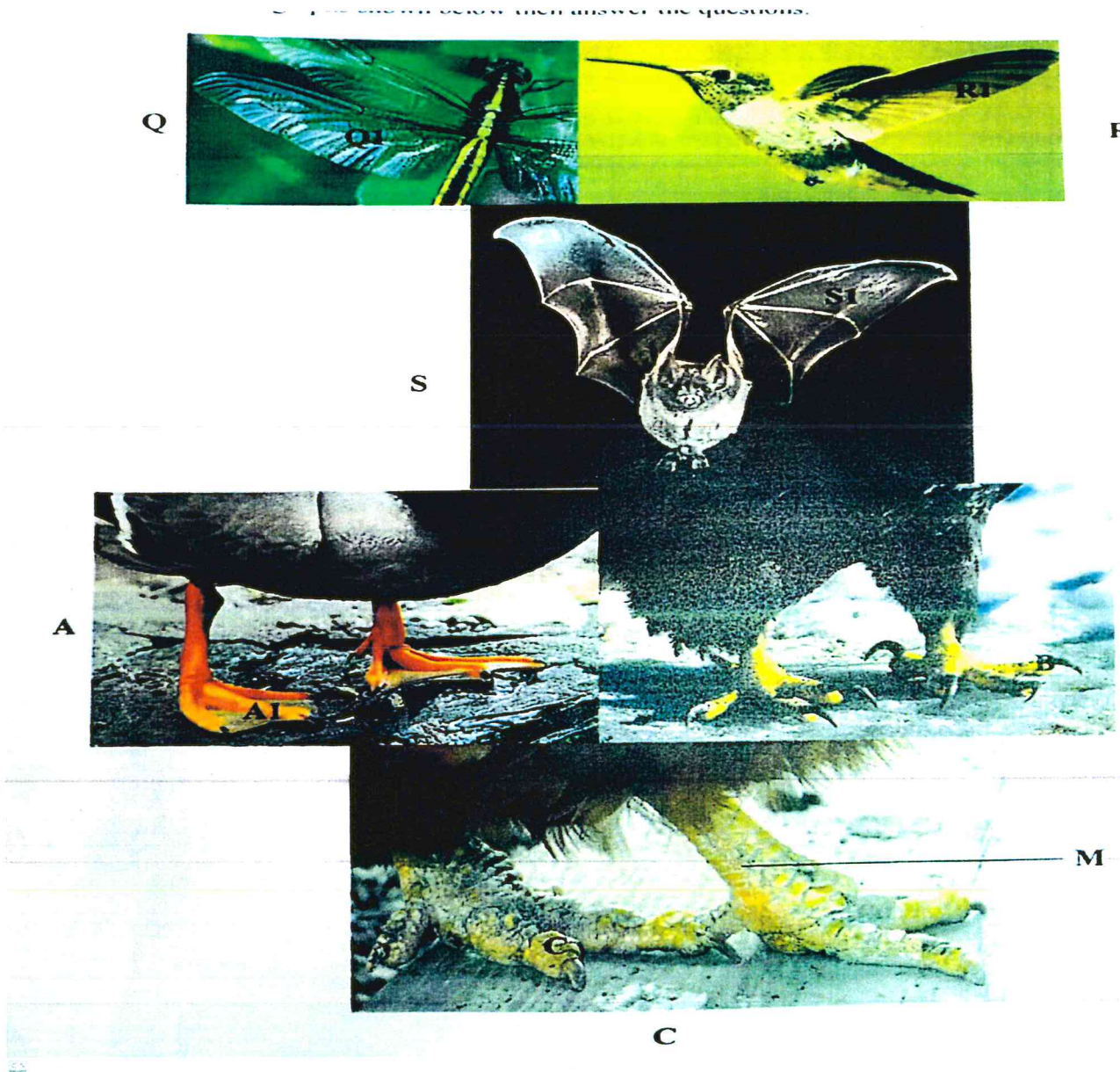
Procedure: (2marks)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Results: (1mark)

\_\_\_\_\_  
\_\_\_\_\_

2. Study the photographs shown below then answer the questions that follow.



a) State the type of evolution represented by structures **Q1**, **R1**, and **S1**. (1mark)

---

b) Explain the type of evolution identified in (a) above (1mark)

---

c) Give the evolution term used to describe structures

(i) Q1, R1 and S1: \_\_\_\_\_ (1mark)

(ii) A1, B1, and C1: \_\_\_\_\_ (1mark)

(d) (i) What type of evolution is illustrated by the limbs (A1, B1 and C1) (1mark).

(i) Name the class for each Q, R and S. (3marks)

Q: \_\_\_\_\_

R: \_\_\_\_\_

S: \_\_\_\_\_

(ii) Give one observable reasons for your answer for class S (1mark)

\_\_\_\_\_  
\_\_\_\_\_

(iii) Suggest the diets of animals B and R (2marks)

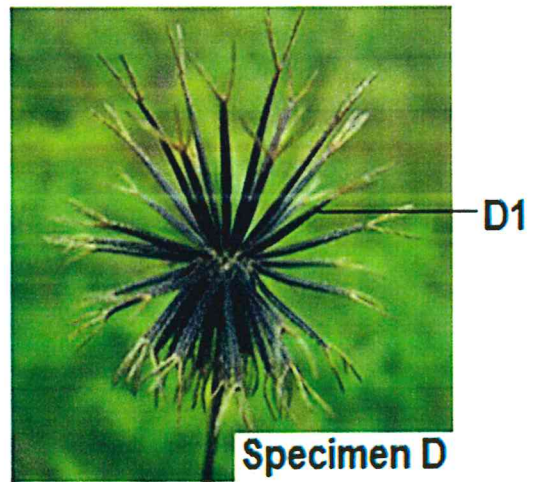
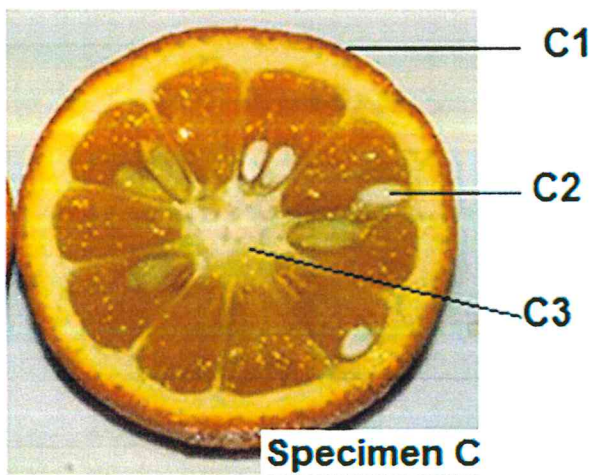
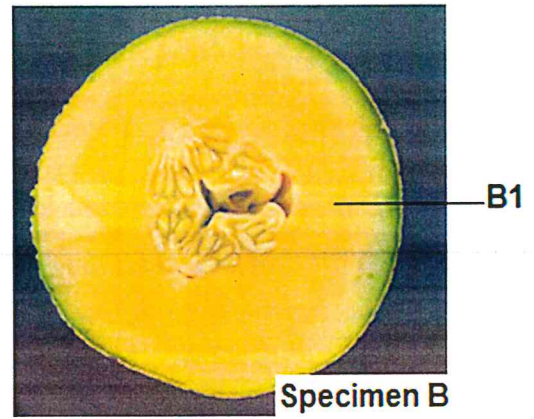
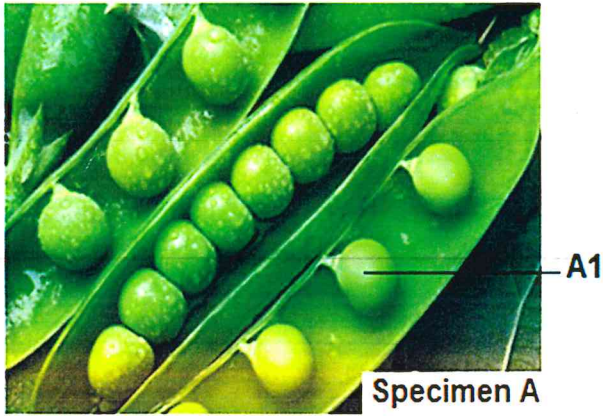
B: \_\_\_\_\_

R: \_\_\_\_\_

(iv) How is beak of animal B adapted to its function (1mark)

\_\_\_\_\_  
\_\_\_\_\_

3. Study the specimens provided then answer the questions below.



(a) Name the parts labeled A1, B1, C1 and C3 (4marks)

A1 \_\_\_\_\_

B1 \_\_\_\_\_

C1 \_\_\_\_\_

C3 \_\_\_\_\_

(b) Fill in the table below with appropriate agent of dispersal and give a reason. (2mark)

specimen	Agent of Dispersal	Reason
A		

(c) How does part C2 adapt Specimen C to its agent of dispersal? (1mark)

---



---

(d) Explain why Specimen A is important in a child's diet. (1mark)

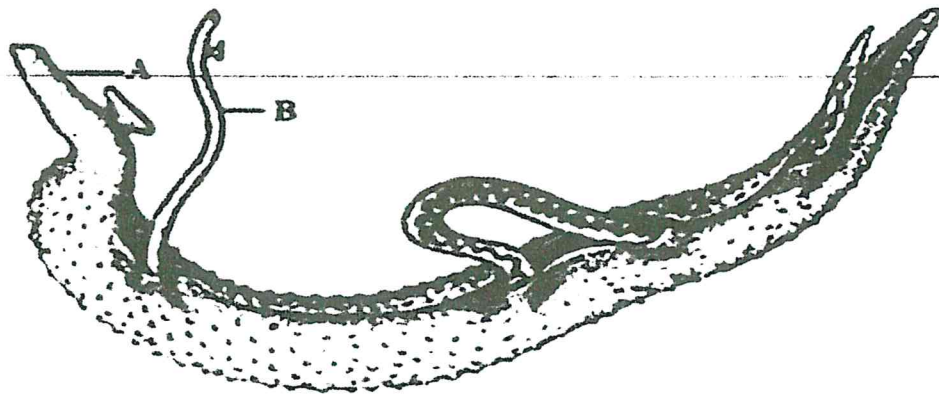
---



---

(e) The diagram below represents two mature parasitic worms, labelled A and B, of the species

*Schistosoma mansoni* that causes bilharzia



(i) With a reason, identify the male and the female worm in the diagram above. (3marks)

Male \_\_\_\_\_ (ii)

Female \_\_\_\_\_

Reason \_\_\_\_\_

---

(ii) Name **two** hosts, primary and intermediate, for these parasitic worms. (2marks)

Primary host \_\_\_\_\_

Intermediate host \_\_\_\_\_

(iii) State **one** way of controlling the spread of bilharzia (1marks)

\_\_\_\_\_  
\_\_\_\_\_