



MARANDA HIGH SCHOOL

Kenya Certificate of Secondary Education
PRE-MOCK EXAMINATIONS 2022

231/3

BIOLOGY

Paper 3

JUNE

2022

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1³/₄ 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 1³/₄ 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 | |
| TOTAL | 40 | |

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 2cm^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 2cm^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 cm^3 from the Irish potato. Crush the cube to obtain a paste. Place the paste into a test tube labeled C. add 2 cm^3 of amylase solution. Leave the set up for at least 30 minutes.

(i) Record your observations (1mark)

C _____

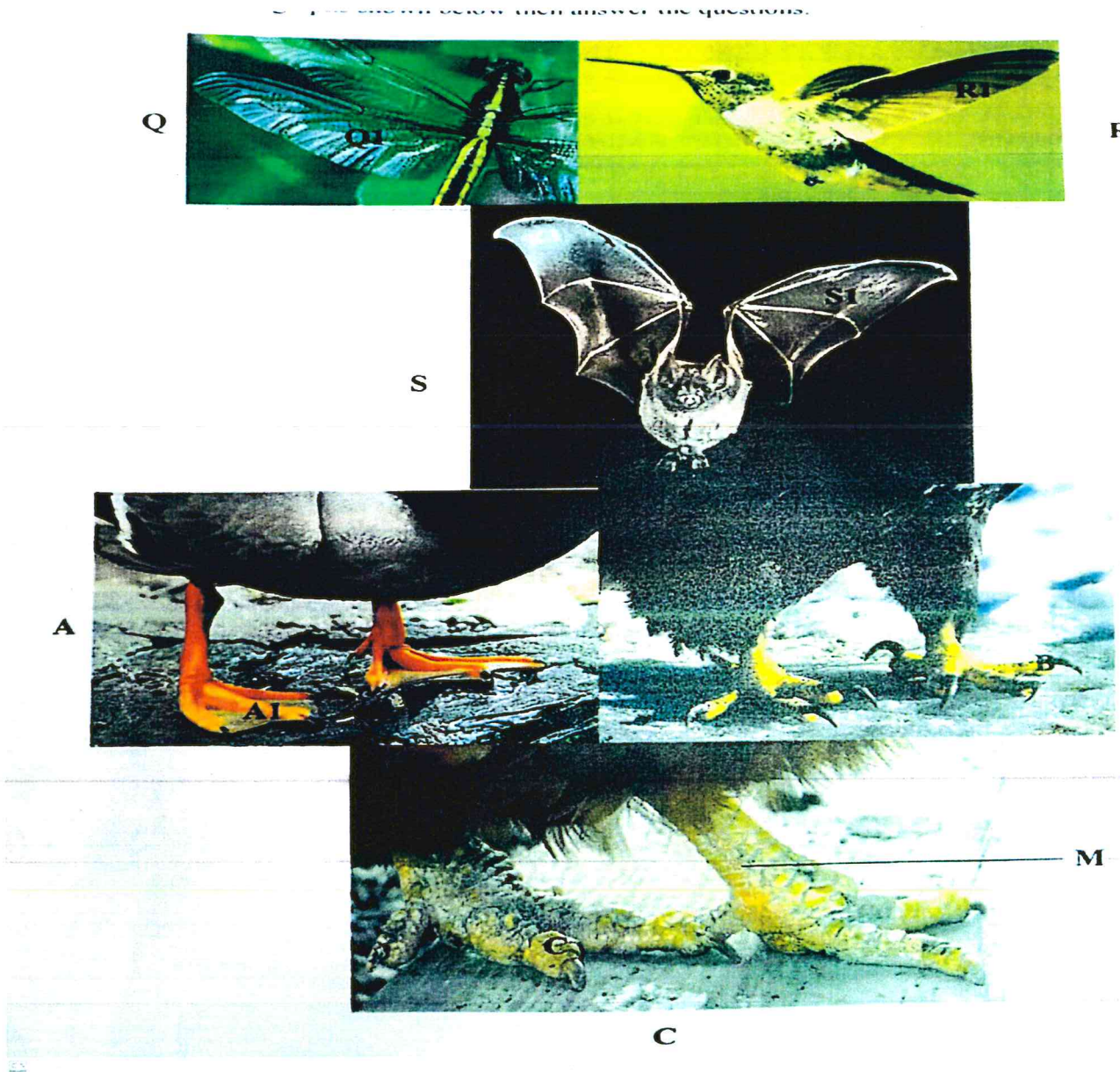
(iv) Account for the result in (b)(iii) above (2marks)

(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)

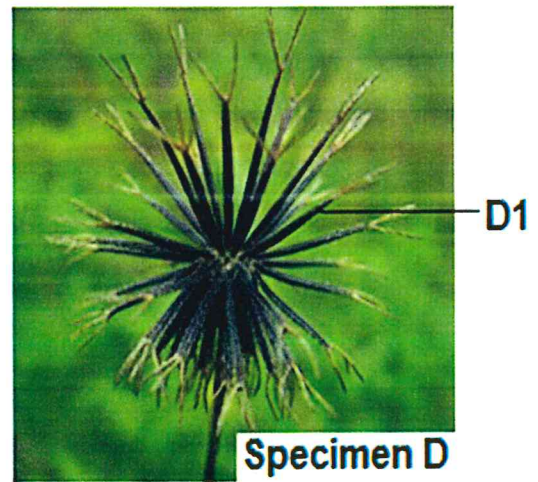
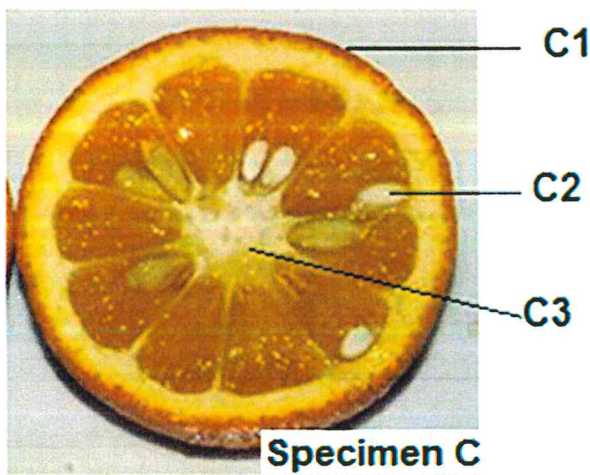
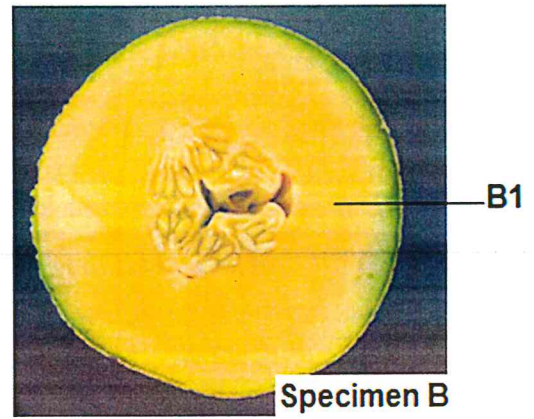
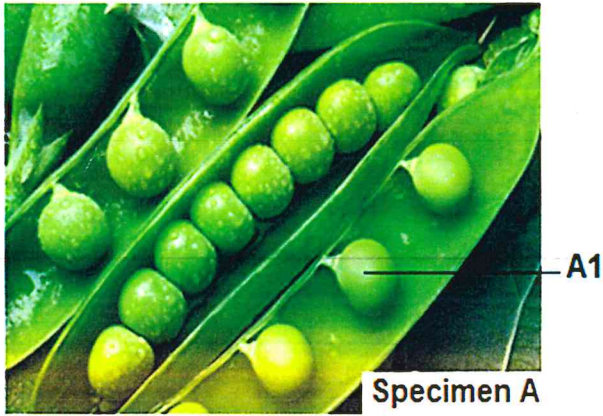
(iii) Suggest the diets of animals B and R (2marks)

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)

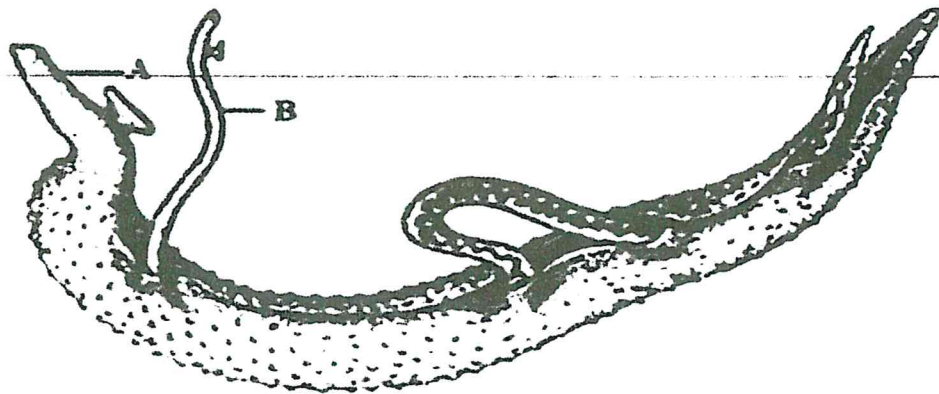
| specimen | Agent of Dispersal | Reason |
|----------|--------------------|--------|
| A | | |

(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)

