

BIOLOGY 231/3

July/Aug,2011

TIME 1HR 45 MIN

BARINGO COUNTY IMPROVEMENT EXAMS -MOCKS**INSTRUCTIONS TO CANDIDATES***Answer all questions*

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.

Answers must be written in the spaces provided in the question paper.

Additional pages *must* not be inserted

FOR EXAMINER'S USE ONLY

Question	Maximum score	Candidate's score
1	16	
2	14	
3	10	
Total score	40	

Q1. (a) Using the reagents provided, carry out starch and reducing sugar tests of substance labeled **Q** in a beaker. Fill in the procedures, observations and your conclusions in the tables below. (3mks)

Food substance	procedure	observation	conclusion
Starch			
Reducing sugar			

(b) Label two test-tubes **A** and **B**

Into the test-tube labeled **A**, add 1ml of solution **Q** and 1ml of **R**

Into the test tube labeled **B**, add 1ml of **Q** and 1ml of **boiled R**

Place the two test-tubes labeled **A**, and **B** into a water bath maintained at 37°C, for at least 30 minutes.

(Ensure that the temperature of the water bath does not fall below 35°C exceed 38°C.)

After 30 minutes , test the contents of each of the test tubes **A** and **B** again for starch and reducing sugar following the procedure in **(a)** above.

Record your observations in the table below. (4mks)

Test tube	Food substance	observation	conclusion
A	Starch		
	Reducing sugar		
B	Starch		
	Reducing sugar		

c) Account for the results at the end of the experiment in the test tube labeled.
(i) **A** (2 mark)

(ii) **B** (2 mark)

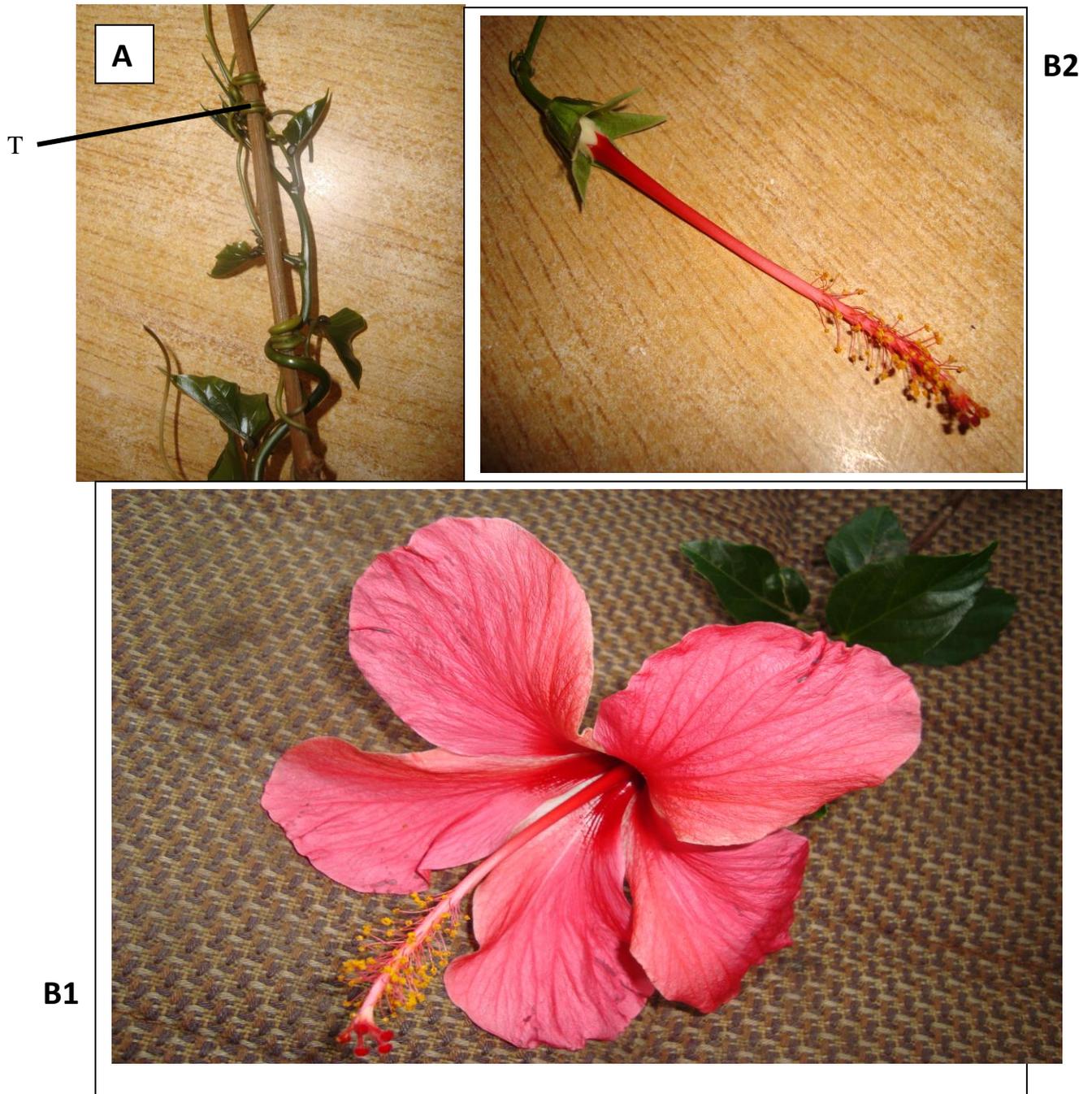
(d) (i) Give the identity of solution **R**. 1mk

(ii) Give two reasons for your answer (d)(i) above. 2mks

e) (i) Name one part of the mammalian body where the process being investigated in this experiment would take place . 1mk

(ii) Give a reason for your answer in (e)(i) above. 1mk

Q2. (a) Examine photograph **A**, **B1** and **B2** carefully and answer the questions that follow. **B2** was extracted from **B1**



- (i) **What** name is given to the coiled part labeled **T** found on specimen **A** (1 mark)
- (ii) **Name** the type of response exhibited by the coiled part on specimen **A** (1marks)
- (iii) **Name** the stimulus responsible for the response named in (ii) above. (1mark)
- (iv) **Explain** how the response exhibited by the coiled part on specimen **A** occurred (3 marks)

(v) **State** the biological significance of the response described in (iv) above to the survival of the specimen. (1 mark)

b). Use photographed specimens labeled **B1** and **B2** above to answer the questions below.

(i) State the agent of pollination for the specimen above. 1mk

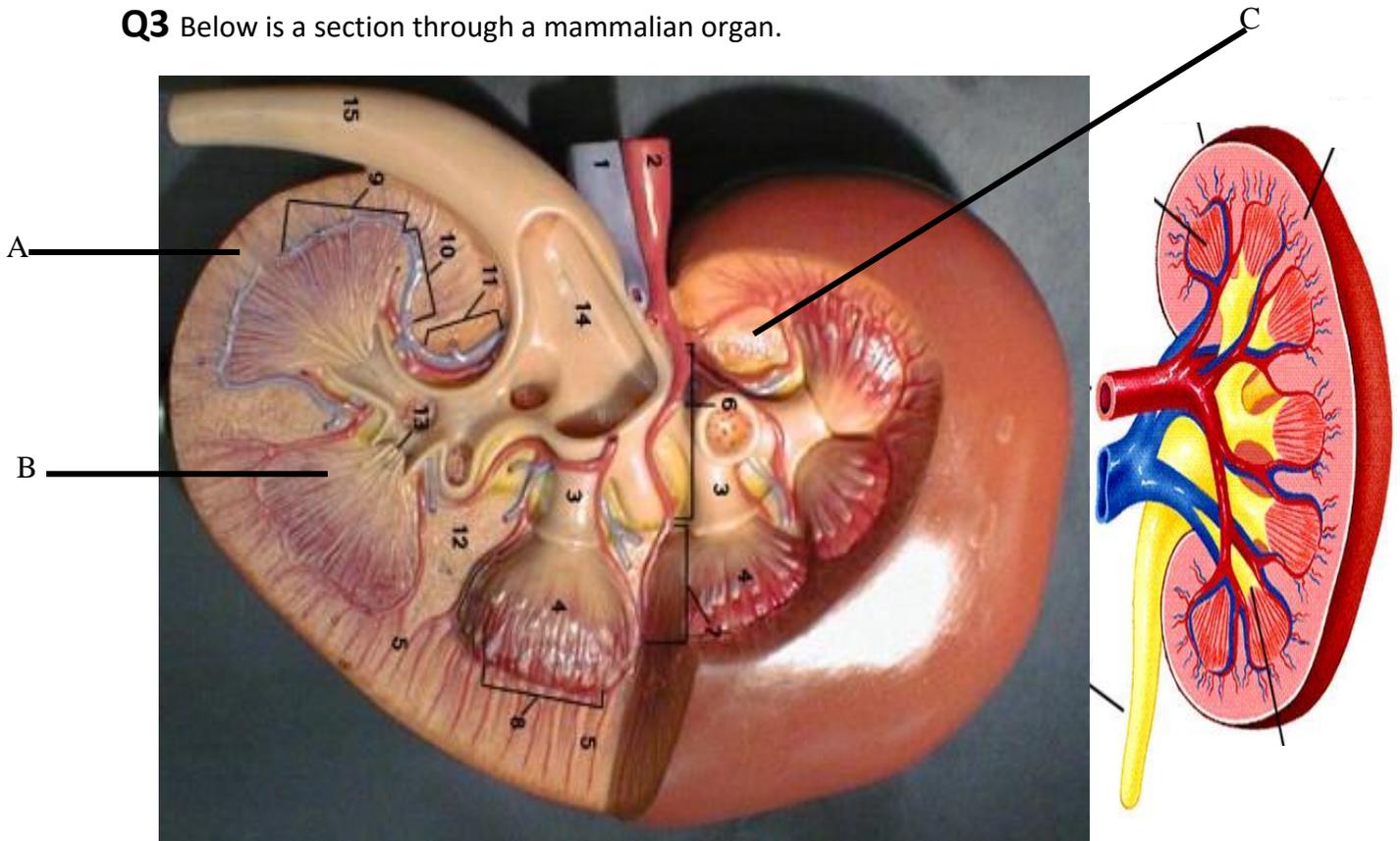
(ii) Give a reason for your answer. 1mk

(iii) Describe the external features of leaves of the specimen **B2**. (3mks)

(iv).Based on the floral parts, state the class to which specimen **B** belongs. 1MK

(v) Give a reason for your answer in (iv) above. (1mk)

Q3 Below is a section through a mammalian organ.



i) Identify the section (1mk)

ii) Name the parts labeled **A, B** and **C** (3mks)

A _____

B _____

C _____

iii) State two functions of the photographed specimen. (2mks)

iv) Label on the photograph using **G** and **L** the region where the **Glomerulus**, and **Loop of Henle** are located respectively. (2mks)

(v) Name a process that occurs in the glomerulus and Loop of Henle

Glomerulus _____

Loop of Henle _____ (2mks)