

Name _____ Index No: _____

231/2
BIOLOGY
THEORY
JUNE/AUGUST 2010
PAPER 2
2 HOURS

FORM FOUR MID-YEAR CONTINUOUS ASSESSMENT TEST
Kenya Certificate of Secondary Education
BIOLOGY
PAPER 2
THEORY
2 HOURS

INSTRUCTION TO CANDIDATES

Write your name and index number in the spaces provided.

This paper consists of two sections A and B.

Answer all the questions in section A in the spaces provided

In section B answer question 6 (compulsory) and either question 7 or 8 in the spaces provided.

For Examiners use only.

Section	Question	Maximum score	Candidates score
A	1	8	
	2	8	
	3	8	
	4	8	
	5	8	
B	6	20	
	7	20	
	8	20	
	Total score	80	

This paper consist of 9 printed pages

Please Turn Over

SECTION A

Answer all the questions in the spaces provided

1. The diagram below represents the structure of the mammalian heart. Study it and answer the questions that follow.

D C E M B A F

(a) Name part marked

(3mks)

A

B

C

(b) What is the role of the part marked B in mammalian circulation

(1mk)

(c) State one structural difference between the blood vessels marked E and F

(1mk)

(d) State the importance of a test cross?

(1mk)

3. The diagram below represents the internal structure of a leaf. Study it and answer the questions that follow.

A B C D E

(a) Name the parts marked A and E

(2mks)

A

E

(b) State the roles of parts marked B and C in plant nutrition

(2mks)

(c) Briefly describe the process of gaseous exchange between part marked D and the cells during the day (4mks)

4. The diagram below represents a section of the mammalian ear.

A B C Oval window Auditory canal Ear drum

(a) Name the parts marked (3mks)

A

B

C

(b) State how the eardrum is adapted to its function

(1mk)

(c) Briefly describe the transmission of sound waves from auditory canal to oval window

(4mks)

5. (a) State the meaning of apical dominance in plants

(1mk)

(b) Name the hormone associated with apical dominance.

(c) What is the importance of apical dominance?

(d) Briefly describe the effects of the following plant growth hormones

(i) Gibberellins

(2mks)

(ii) Abscisic Acid

(3mks)

SECTION B (40 MARKS)

Answer questions 6 (compulsory) and either question 7 or 8 in the spaces provided.

6. Students investigated a certain physiological process using beans treated as described below

Set up 1 – Beans soaked in water and introduced into a vacuum flask

Set up 2 – Boiled beans were introduced into a vacuum flask.

Set up 3 – Boiled beans washed in antiseptic solution

Thermometers were used to measure temperature changes. It was observed that there was no temperature change in set up 3. The results of set up 1 and 2 shown in the table below.

Time (days)	Temperature (0c)	
	Set up 1	Set up 2
0	15	15
1	20	15
2	25	16
3	28	18
4	30	19
5	28	20
6	25	25
7	22	28
8	20	30
9	18	32

(a) Plot graphs on the same axis of temperature change against time (7mks)

(b) Account for the temperature change observed in set up 1 and 2

(i) From day zero to day two (4mks)

(ii) After day five (4mks)
