NAME.....CLS.....C.NO.....ADM.....

NYABURURU GIRLS' NATIONAL SCHOOL
OUR LADY OF LOURDES

DATE DONE.....

INVIGILATOR.....

DATE RETURNED.....

DATE REVISED.....

BIOLOGY PAPER TWO
MARCH SERIES
KCSE TRIAL EXAMS 2016
TIME: 2 HOURS

INSTRUCTIONS

- Answer all questions in section A in the spaces provided.
- In section B, answer question 6 (compulsory) then answer either question 7 or 8.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1	8	
2	8	
3	8	
4	8	
5	8	
6	20	
7	20	
8	20	
TOTAL	80	

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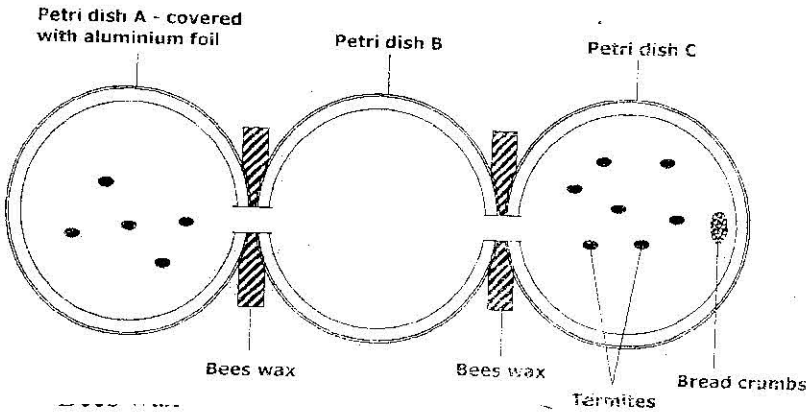
SECTION A

1. An experiment was done using three petridishes X, Y and Z. Petridish X was covered with aluminium foil, while C had bread crumbs placed inside. The three petridishes were joined to each other using bees wax and connected to one another through slits at the sides.
   A dozen termites were placed in the middle petridish (Y) The figure below shows results of the experiment. Study it and answer the questions that follow.

Petri dish A –
with aluminiu



Bees wa

(a) Name the two types of responses demonstrated by the experiment. (2 Mks)

(b) Which of the response is faster? Explain. (2 Mks)

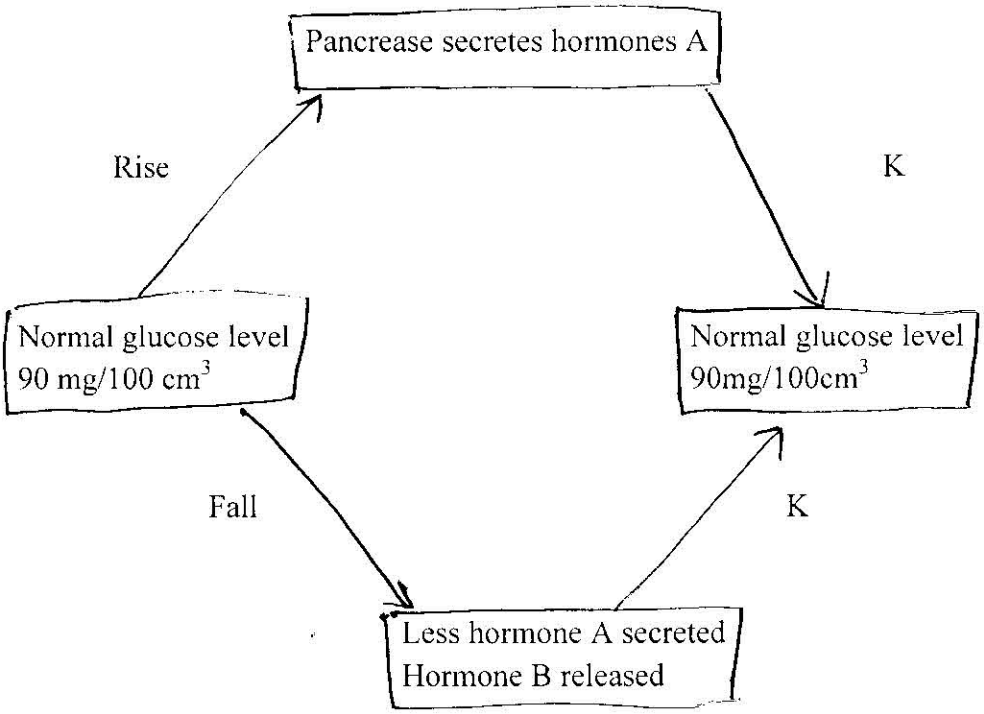
(c) Give the survival value of each of the responses. (2 Mks)

(d) Suppose the experiment was repeated using naphthalene in petridish Z:

(i) Suggest the expected response if any. (1 Mk)

(ii) Explain your answer in d (i) above. (1 Mk)

2. The diagram below shows how blood glucose in mammalian body is regulated.



(a) (i) Name hormone A and B. (2 Mks)

(ii) State two ways by which hormone A lowers glucose level in blood when it rises above 90 mg/100 cm. (2 Mks)

(b) Name the condition one would suffer from if there is failure of the pancrease to secrete hormone A. (1 Mk)

(c) Explain why blockage of pancreatic duct hinders digestion but normal sugar regulation continues. (2 Mks)

(d) Define homeostasis. (1 Mk)

3. (a) State Mendel's first law of inheritance. (1 Mk)

(b) A man with normal skin colour get married to a woman with normal skin colour. They gave birth to three children, one of them is albino.

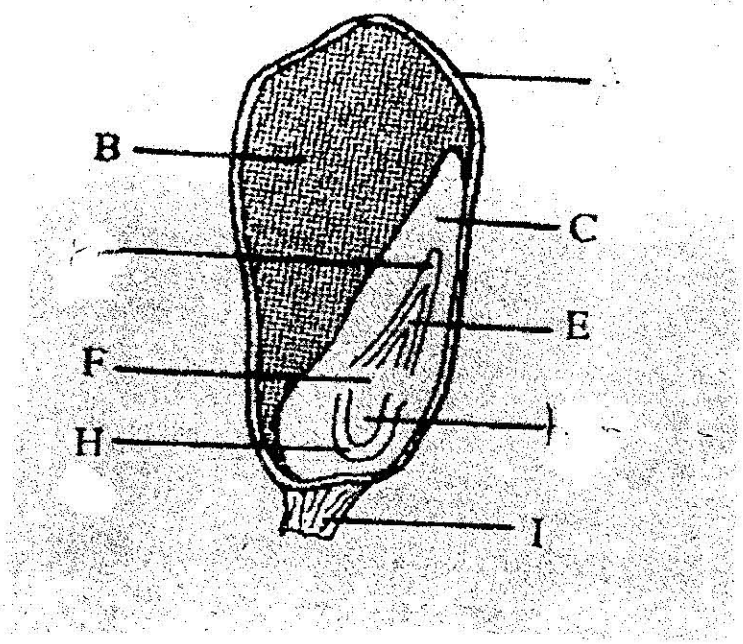
(i) What are the possible genotypes of the parents and children? Show your working using letter A to represent gene for normal skin colour. (4 Mks)

(ii) What is the probability that the fifth born child from the above parentage will be an albino? (1 Mk)

(c) Define the term test cross. (1 Mk)

(d) Explain why colour blindness is more common in males than in females. (1 Mk)

4. The diagram below shows longitudinal section of maize grain.



(a) (i) Name parts labelled A and K. (2 Mks)

(ii) State the function of part F during germination. (1 Mk)

(b) Account for the observation made in each of the part labelled B and C when iodine solution is applied on the cut surface. (2 Mks)

Part B

Part C

(c) Which type of germination is exhibited by the maize grain? (1 Mk)

(d) State the role of water in the germination of the maize grain. (1 Mk)

5. The diagram below represents part of bones at a joint in the forelimb of a mammal.