KIAMBU INTERZONAL

KENYA CERTIFICATE OF SECONDARY EDUCATION

231/3
BIOLOGY(PRACTICAL)
PAPER 3
JULY/AUGUST-2009
TIME: 2 HOURS

You are provided with suspension labeled M and liquid N. Divide each of these into two portions.

(a) Using the reagents provided test for the food substances in the first portions of suspension M and liquid N. Record your procedures, observations and deductions in the table below.

Portion 1 of suspension M

FOOD	PROCEDURE	OBSERVATIONS	DEDUCTIONS

Portion 1 of Liquid N

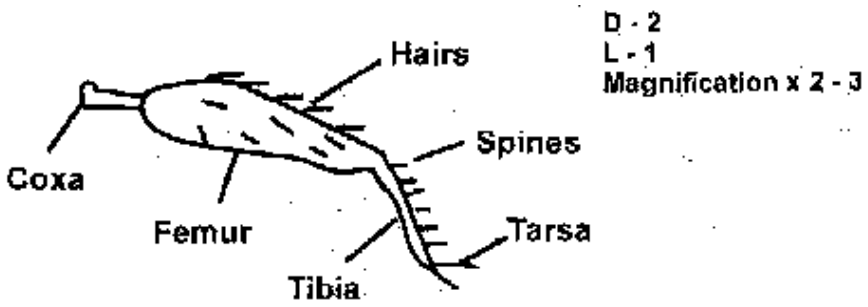
FOOD	PROCEDURE	OBSERVATION	DEDUCTIONS

(b) Using a piece of thread provided, tie one end of the visking tube. Open the other end of the visking tubing and fill it with the second portion of suspension M. Tie to close the visking tubing, wash and then place in the second portion of liquid N. Leave the set up for 20 minutes. After 20 minutes remove the visking tube and then test for the food substances present in liquid N. Record your procedures, observations and deductions in the table provided.

FOOD	PROCEDURE	OBSERVATIONS	DEDUCTIONS

(C) Account for the results obtained after carrying out food tests in liquid N after 20 minutes. (5 marks)

2. You are provided with specimen labeled P.



Examine it carefully using a hand lens.

(a) Classify specimen P under the following taxonomic groups giving reasons for your answer.

(i) Kingdom (1 mark)
Reason (1 mark)

(ii) Phylum (1 mark)
Reasons (2 marks)

(iii) Class (1 mark)
Reasons (2 marks)

(b) State the type of habitat of specimen P based on general structure.
Given reason

Habitat (1 mark)
Reason (1 mark)

(c) Observe the general morphology of specimen. How is it able to escape notice of predators in its habitants (2 marks)

(d) Observe the hind and forewings of specimen P. List down differences between the forewings and hind wings.

Fore wings Hind wings (4 marks)

(e) Remove one of the hind limbs of specimen P and make a well labeled diagram. State the magnification. (4 marks)

3. (a) You are provided with specimen labeled B_1,B_2, B_3,B_4,$B_5$$B_6$,$B_7$and B_8. Use the dichotomous key provided below to identify each specimen.

Write down all the steps that you followed to identify each specimen.

<u>The dichotomus key.</u>

1. (a) Simple leaves……go to 2
   (b) Compound leaves…….go to 3
2 (a) With parallel venation……..Poaceae
   (b) With net work venation……..go to 4
3. (a) with three leaflets…….go to 5
   (b) With more than three leaflets……go to 5
   (a) Succulent……..Aloe
   (b) Not succulent……go to 6
   (a) Leaflets attached at the tip of petiole…….manihot
   (b) Leaflets arranged along mid-rib…….go to 7
   (a) With rough texture……..Lantana camare
   (b) With smooth texture……Hibiscus
   (a) Leaf bipinnate…….jacaranda
   (b) Leaf pinnale…….Cassia species.

Specimen	**Steps followed**	**Identify**
B_1		
B_2		
B_3		
B_4		
B_5		
B_6		
B_7		
B_8		

(b) With a reason state the habitat of specimen B_1.

Habitat (1 mark)

Reason (1 mark)

(c) Classify specimen B_2 into the following taxa sub-division. (1 mark)

Class (1 mark)