NAME……... INDEX NO…….....…….

CANDIDATE'S SIGNATURE……...

DATE……..…….....

231/3
BIOLOGY (PRACTICAL)
PAPER 3
JULY/AUGUST 2011
TIME: 1 HR. 45 MINS.

NANDI SOUTH, NANDI EAST AND TINDIRET DISTRICTS JOINT EXAMINATION 2011

Kenya Certificate of Secondary Education
BIOLOGY PAPER 3 (PRACTICAL)

INSTRUCTION TO CANDIDATES:
Write your **Name** and **Index Number** in the spaces provided **above**.
Sign and write the **date** of examination in the spaces provided **above**.
Answer **all** the questions in the spaces provided.
You are required to spend the first 15 minutes of the 1¾ hours allocated for this paper reading the whole paper carefully before commencing your work.
Candidate may be penalised for recording **irrelevant** and **incorrect** spellings especially of technical terms.

FOR EXAMINER'S USE ONLY:

Question	Maximum Score	Candidate's Score
1	17	
2	13	
3	10	
Total Score	40	

1. You are provided with solution L_1, L_2 and L_3.

- L_3 is the same as L_2 except that L_3 has been boiled.
- In the test tube labelled A, add 1ml of solution L_1.
- In the test tube labelled B, add 1ml of solution L_1 and L_2.
- In the test tube labelled C, add 1ml of solution L_1 and L_3.

(a) Draw a drop from each of the test tubes A, B and C and place on a white tile. To each, perform the iodine test. Record your observations and conclusions in the table below. (6mks)

TEST TUBE	OBSERVATION	CONCLUSION
A		
B		
C		

(b) Place the three test tubes A, B and C into a water-bath at 37ºC.
Maintain the temperature of the water-bath between 35ºC to 38ºC. Leave the set-up for 30 minutes. After 30 minutes perform the iodine test on the contents of test tube A, B and C as in "a" above. Record your observations and conclusions in the table below.

TEST TUBE	OBSERVATION	CONCLUSION
A		
B		
C		

(c) Account for the results at the end of the experiment. (2mks)

_____

_____

_____

_____

(d) (i) Suggest the identity of solution L_2. (1mk)

_____

(ii) Give a reason to your answer in d(i) above. (1mk)

_____

_____

_____

(e) Suggest where the process being investigated in this experiment would take place in humans. (1mk)

_____

_____

_____

2. You are provided with specimen V. Examine it and answer the question that follow.

(a) Giving a reason, state the division to which the specimen belongs. (2mks)

Division _____

Reason _____

_____

_____

(b) Using a scalpel make a longitudinal section of the flower and examine it with the help of a hand lens. Draw and label the section you have cut. (3mks)

(c) Describe the flower as fully as possible. (5mks)

_____

_____

_____

_____

_____

(d) (i) Identify the agent that pollinates this flower. (1mk)

_____

(ii) Give **two** reasons to support your answer in (i) above. (2mks)

_____

_____

_____

_____

3. You are provided with specimen W in a petri-dish. Study it and answer the questions that follow.

(a) Classify the specimen giving reasons. (4mks)

(i) Phylum _____

Reasons _____

_____

_____

(ii) Class _____

Reasons _____

_____

_____

(b) State with reason three modes of locomotion exhibited by the specimen. (6mks)

(i) _____

Reasons_____

_____

(ii) _____

Reasons_____

_____

(iii) _____

Reasons_____

_____