NAME: _____ INDEX NO: _____

DATE: _____ CANDIDATE'S SIGN: _____

231/3
BIOLOGY
PAPER 3
PRACTICAL
MARCH/APRIL, 2019
TIME: 1 ¾ HOURS

MOKASA 1 JOINT EVALUATION EXAMINATIONS

Kenya Certificate of Secondary Education

231/3
BIOLOGY
PAPER 3
PRACTICAL
MARCH/APRIL, 2019
TIME: 1 ¾ HOURS

INSTRUCTIONS TO CANDIDATES

- Write your Name and Index No. in the spaces provided above
- Answer ALL the questions in the spaces provided

FOR EXAMINERS USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATES SCORE
1		
2		
3		

TOTAL		

1. You are provided with the following: suspension labeled L, dilute HCl, NaOH, unboiled solution M_1 and boiled solution M_2.

a) Perform procedures (i) to (iii) and in each procedure maintain the mixture at a temperature of between 34^0C to 38^oC for 30 minutes and fill in the table that follows.

(i) Mix suspension L with 1ml of solution M_1 and add 1ml of dilute HCl to the mixture.

(ii) Mix suspension L with 1ml of solution M_1 and add 1ml of NaOH solution to the mixture.

(iii) Mix suspension L with 1ml of solution M_2 and 1ml of HCl to the mixture.

Fill in the table below: (3marks)

Procedure	Observation
i)	
ii)	
iii)	

i. Account for the difference in observation between procedure (i) and (ii) and (i) and (iii).

(2mks)

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b) Identify solution M and give two reasons for your answer.

i) Identity ..... (1mark)

ii) Reason (1 mark)

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c) You are provided with specimen K, hydrogen peroxide (H_2O_2) solution, stop watch, motor and pestle. Make two cylinders each measuring 2cm long. Crush one of the potato cylinders to make a paste and add 1ml of H_2O_2 solution to each of the potato paste and cylinder.

(i) Between the two which one takes a longer time to stop producing foam?

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ii) Record the time taken by the crushed potato to stop producing foam. (1mark)

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iii) Account for the above difference in time taken for foam to stop forming. (3marks)

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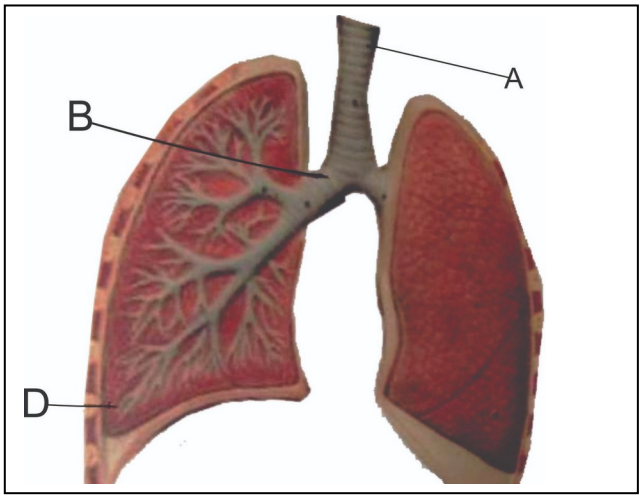
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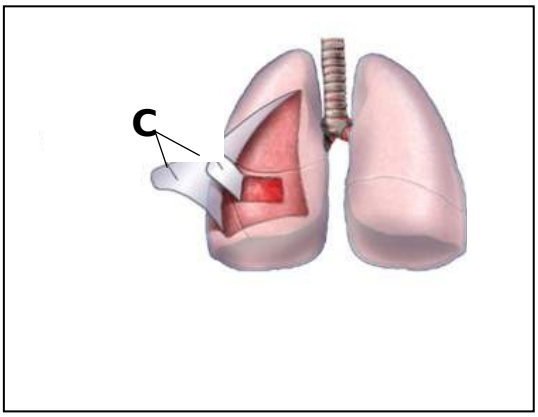
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iv) Calculate the rate of foam formation in the crushed potato cylinder. (3marks)

2. Study the diagrams below and answer the questions that follow.





a) (i) Name the parts labeled A, B, C and D. (4marks)

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(ii) State the adaptation of the part labeled A to its function. (2marks)

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(iii) State **one** function of the part labeled C.
(1mark)

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State **three** adaptations of the parted labeled D. (3marks)

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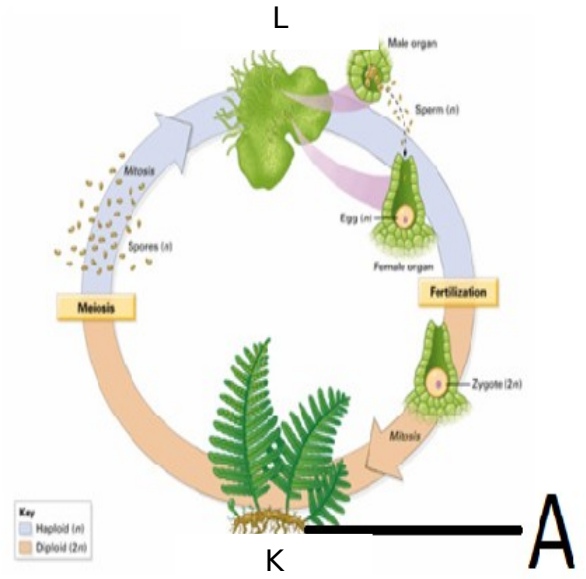
Identify the structures that perform similar function as D, above, in:

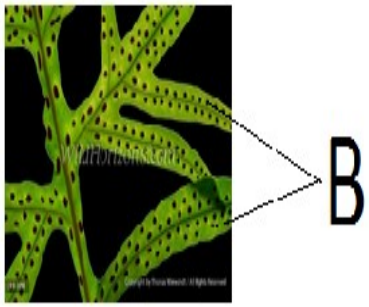
(i) Amoeba……

(1mark)

(ii) Fish ……(1mark)

3. The diagram below illustrates the life cycle of a certain organism.





a) (i) Giving reasons, name the division to which the organism belongs.

Division…… (1mark)

Reasons (2marks)

……

……

……

(ii) Which portion of the plant's life is independent?

(1mark)

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b) (i) Name the parts labeled A and B. (2marks)

A .....

B .....

(ii) State one function of the part labeled B. (1mark)

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(i) Define the term alternation of generation. (1mark)

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(ii) Identify the generations labeled K and L.
(2marks)

K .....

L .....

(iii) In what way is generation L advantageous to generation K?
(2marks

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