

NAME DATE

INDEX NO. SIGNATURE

231/3
BIOLOGY
PAPER 3
(PRACTICAL)
TIME: 1¼ HOURS.

LANET JOINT EVALUATION TEST, 2020

Kenya Certificate of Secondary Education

231/3
BIOLOGY
PAPER 3
(PRACTICAL)
NOVEMBER/DECEMBER 2020
TIME: 1¼ HOURS.

INSTRUCTIONS TO CANDIDATES

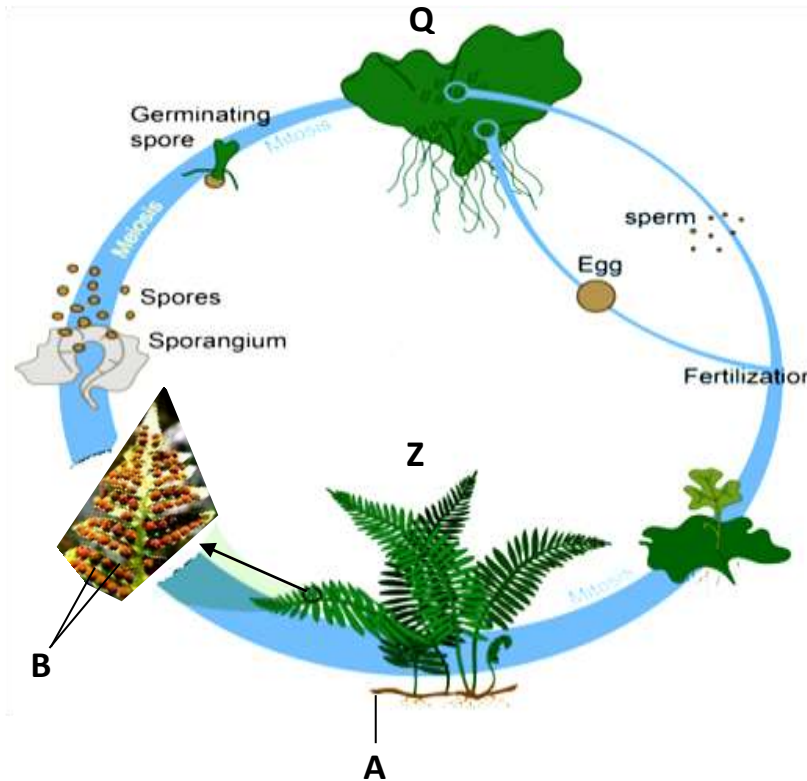
- Answer **all** the questions.
- You are required to spend the first 15 minutes of the 1¼ hours allowed for the paper reading the whole paper carefully before commencing your work.
- Answers must be written in the spaces provided in the question paper.
- Additional pages must not be inserted.
- This paper consists of 5 printed pages. Candidates should check to ensure that all pages are printed as indicated and no questions are missing

FOR EXAMINER'S USE ONLY

Questions	Maximum score	Candidate's score
Question 1	14	
Question 2	14	
Question 3	12	

Total score	40	
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1. 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)

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(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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.....

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

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

Q

Z

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

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(iv) Give a reason why the plant shown in the diagram above is common in swampy areas (2marks)

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2. You are provided with several specimens **N** and indicator **D**, which is Bromolthymol blue. Study them and answer the questions that follow:

(a) (i) Identify the part of plant represented by specimen **N**. (1mark)

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(ii) Give a reason for your answer in a) i) above. (1mark)

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(b) i) Name the physiological process which is taking place in specimen **N**. (1mark)

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.....

ii) Describe the **two** changes which occurred to specimen **N** during the process named in b) i) above. (2marks)

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(c) i) State **two** internal factors which would promote the physiological process exhibited by specimen **N**, (2marks)

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ii) State **two** external conditions which would inhibit the process demonstrated by specimen **N**.(2marks)

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(d) Add 1ml of indicator marked **D** into a test tube, add 6 pieces of specimen **N** into the test tube. Close the mouth of the test tube tightly using a tissue paper. Leave the set up to stand on the tube rack for 30 minutes after which carefully remove specimen **N** without pouring the indicator marked **D** using a wooden splint.

(i) Record your observation after 30 minutes (1mark)

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(ii) Account the observation in d) i) above (3marks)

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(iii) Suggest a control for his experiment. (1mark)

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3. You are provided with photograph L, K and J. Examine them.

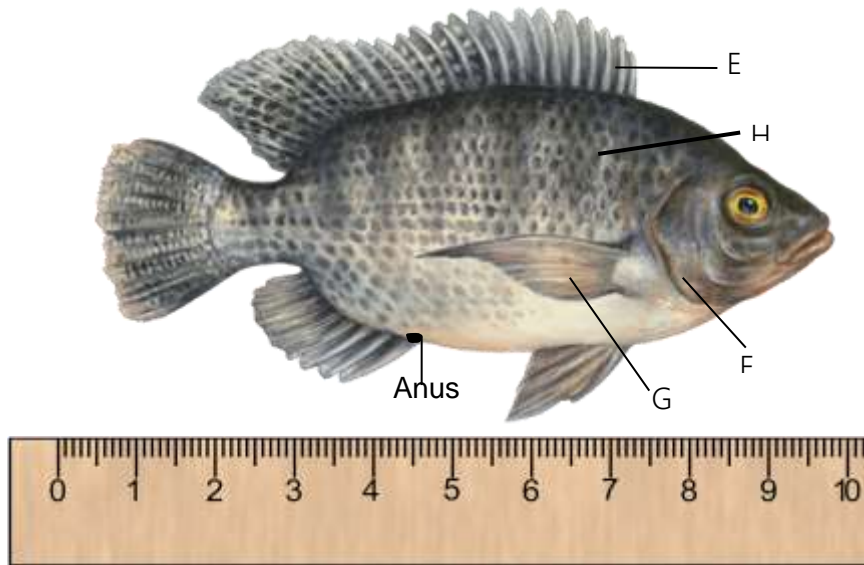
PHOTOGRAPH L



PHOTOGRAPH K



PHOTOGRAPH J



a) Using observable features only, state class of animals shown in the photograph L and K. (4 marks)

L

Class

Reason.....

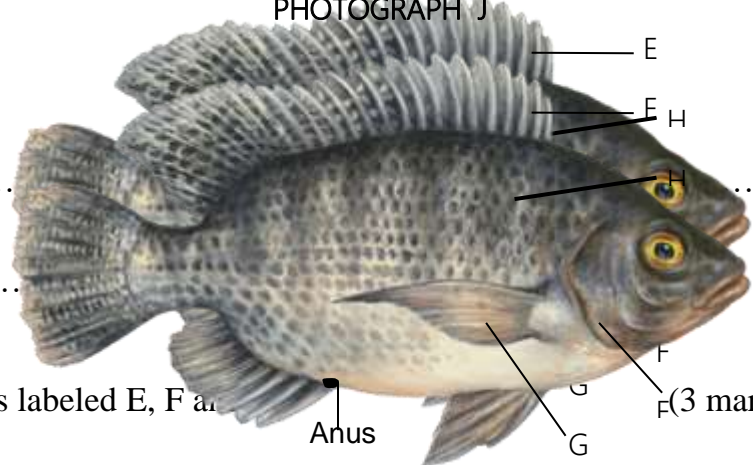
PHOTOGRAPH J

PHOTOGRAPH J

K

Class

Reason.....



b) (i) On the photograph J name the parts labeled E, F and G. (3 marks)

E.....

F.....

G.....

(ii) State the functions of the structures labeled H in photograph J. (2marks)

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c) (i) The actual length of animal J in cm is shown by a section of the ruler in the photograph.
Calculate the tail power (show your working) (2marks)

(ii) State the significance of tail power to the life of fish in water. (1mark)

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