Name……..……..**Adm. No.**……..

Signature…….. **Date**……

231/3

Biology

Practical

January 2019.

Time: 2 Hours.

NABISTA JET 1

Biology Examinations

Kenya Certificate of Secondary Education (K.C.S.E) - 2019

Instructions to candidates

Write your name and index number in the spaces provided at the top of this page.
Answers must be written in the spaces provided in the question paper.
Candidate may be penalized for incorrect spelling especially of technical terms.
You are required to spend the first 15 minutes of the1 ¾ hours allowed for this paper reading the whole paper carefully before commencing your work.

For Examiners Use Only

Question	Maximum Score	Candidate's Score
1	14	
2	14	
3	12	
Total score	40	

This paper consists of 6 printed pages. Candidates should check the question paper to ensure that all pages are printed as indicated and no questions are missing.

1. You are provided with liquids labelled **A** and B**.**

Spare about 10ml of the liquids for part (a) of this question.

- Tie tightly one end of the visking (dialysis) tubing. Open the other end of the tubing and half fill it with liquid **A**. Tightly tie this end. **Ensure there is no leakage in both ends**. Immerse the tubing in a beaker containing liquid **B**. Leave the set up for at least 30 minutes.

- Using iodine and Benedict's solution provided; test for the food substance in liquids A and **B**. Record the procedure, observation and conclusion in the table below. (6 marks)

Liquid	**Procedure**	**Observation**	**Conclusion**
A			
B			

- After at least 30 minutes remove the visking tubing from the beaker and wash the outside of the tubing thoroughly to remove traces of liquid **B**.
- Using the same reagents, test the food substance in liquid **A** in the visking tubing. Record your observation and conclusion in the table below. (2 marks)

Liquid	Observation	Conclusion
A		

a. Name;

i. The physiological process being demonstrated by this experiment. (1 mark)

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ii. Parts of the human body where the process named in (c) (i) above takes place. (2 marks)

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b. Account for the results obtained after carrying a second food test on liquid **A.** (3 marks)

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2. Photographs **N, Q**, **U**, **V** and **X** are specimens from different plants.

a) State one structural similarity and one structural difference between the specimens in photographs **V** and **X**.

Similarity. (1 mark)

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……

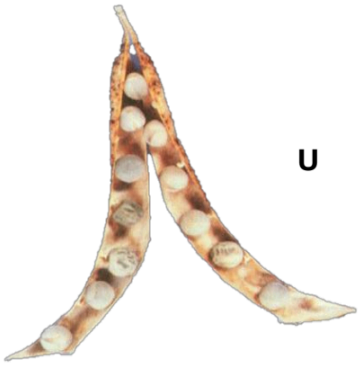
Difference. (2 marks)

……

……

N

Q



U

.....

V

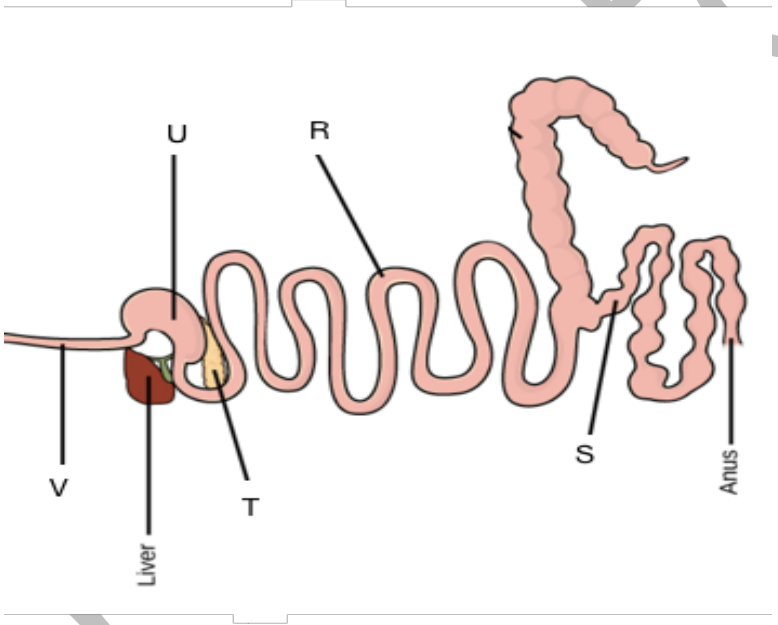
X

b) Complete the table below using the specimens in the photographs. (8 marks)

Specimen	Mode of dispersal	Adaptive feature
N		
Q		
U		
X		

c) Draw and fully label the specimen in photograph Q. (3 marks)

3. Photograph below is part of an alimentary canal of a certain animal.



(a) Giving a reason, suggest the diet of the animal. (2 marks)

Diet

……

……

Reason

……

……

(b) Name the parts labeled **S**, **T**, **U** and V (4 marks)

S …… **T**……

U …… **V**……

(c) (i) On the diagram, label the part that harbours bacteria. (1 mark)

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(ii) What is the role of these bacteria to an animal. (1 mark)

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(d) How is the part labeled R adapted to its functions. (2 marks)

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(e). Name two enzymes in the alimentary canal that digest carbohydrates. (2 marks)

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