

NAME..... ADM NO

SCHOOL..... CANDIDATES SIGN.....

DATE

231/1
BIOLOGY
FORM 1
TIME: 2 HOURS

END OF TERM (III) EXAMINATION -2019

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

231/1
BIOLOGY
FORM 1
TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

- Write your Name, Admission number and Name of your school in the spaces provided
- Answer ALL questions in the spaces provided in the question paper
- Write legibly neatly.

FOR EXAMINERS USE ONLY.

QUESTION	MARKS	CANDIDATES SCORE
A	20	
B	40	
C	40	
TOTAL	100	

*This paper consists of 12 printed pages .
candidates should check the question to ensure that all pages are printed
as indicated and no questions are missing.*

SECTION A: 20 MARKS

1. State the importance of the following characteristics of living things. (2mks)

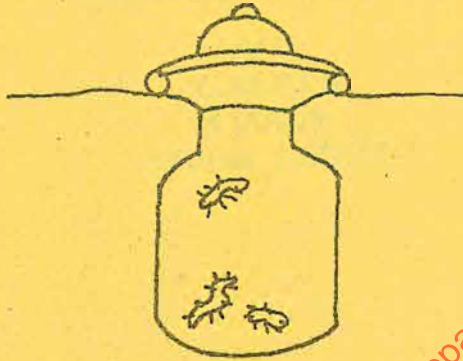
(i)Nutrition

.....
.....

(ii)Reproduction

.....
.....

2. The diagram below shows an apparatus used during collection of specimen for a biological study.



a)Identify the apparatus

(1mk)

.....
.....

b)What is the use of the apparatus named in (a) above

(1mk)

.....
.....

c)Name the apparatus that can be used to collect flying insects.

(1mk)

.....
.....

3. What is the significance of active transport in living organisms. (2mrks)

.....
.....

4. State the name given to the scientists who studies:

a)Insect

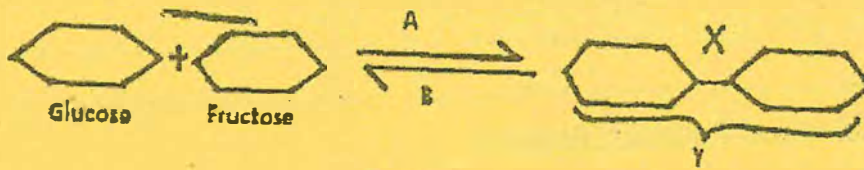
(1mk)

.....
.....

b)The cell

(1mk)

5. Study the reactions below and answer the questions that follow.



a)What biological processes are represented by A and B

(2mrks)

A

B

b)Identify the product Y

(2mks)

c)State the bond represented by X

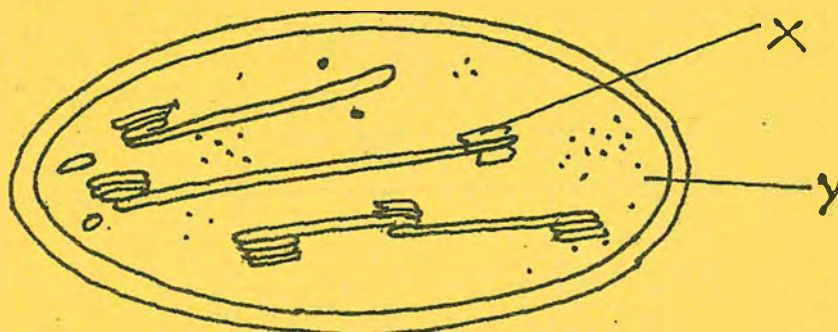
(1mk)

d)Name one food substance that does not undergo digestion in animals.

(1mk)

6. The diagram below represent a cell organelle.

(2mks)



i)Name the part labelled X and Y

X

Y

ii) state two functions of the part labelled X (2mrks)

7. Distinguish between movement and locomotion. (2mks)

SECTION B: 40MARKS

8. a) Classify man in the following taxa. (4mrks)

Kingdom _____

Class _____

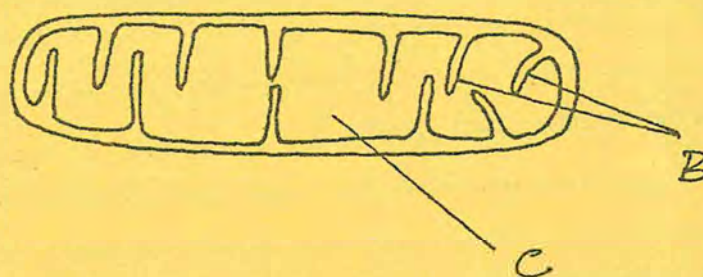
Order _____

Family _____

b) Distinguish between taxonomy and taxon. (2mrks)

c) Define the term species. (2mrks)

9. The diagram below represents a cell organelle



a)i) Identify the organelle

(1mk)

.....
.....

ii) Name part labelled B and C

(2mrks)

B _____

C _____

iii) State the function of the part labelled C

(1mk)

.....
.....

b)i) State two functions of a cell membrane

(2mrks)

.....
.....
.....

ii) Give two properties of a cell membrane that help it to carry out its functions.

(2mrks)

.....
.....
.....

10. In an experiment, a leaf from a plant which had been kept in the dark overnight was boiled in water for a minute. It was then boiled in alcohol and washed in warm water. Iodine solution was then added onto the leaf.

a) Why was the leaf boiled in.

(2mrks)

i) water

.....
.....

ii) Alcohol

.....
.....

b)i) What observation was made on the leaf after adding iodine solution (1mk)

ii) Give a reason for your answer in (b) above. (1mk)

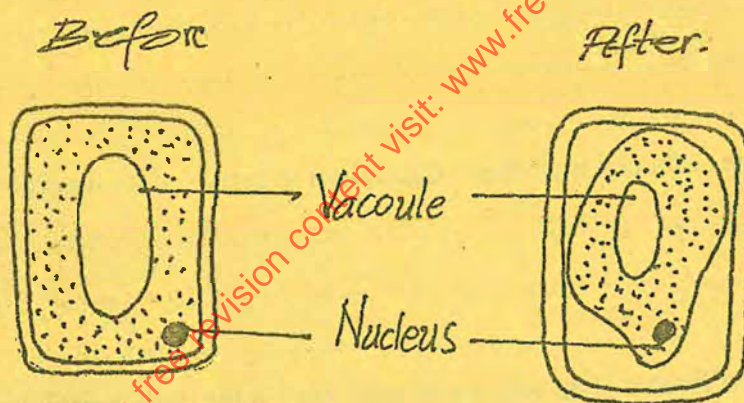
c) What was the aim of the experiment (1mk)

d) Why was it necessary to wash the leaf in warm water. (1mk)

e) What is a variegated leaf C. (1mk)

f) Write a word equation for the process of photosynthesis. (1mk)

11. The diagram below shows the changes in a plant cell when put in solution x.



a) Name solution X (1mk)

b) Explain the observation (2mks)

c) Give a reason why a mature plant cell does not lose its shape even after losing water (1mk)

d) State the importance of osmosis in plants.

(4mks)

.....

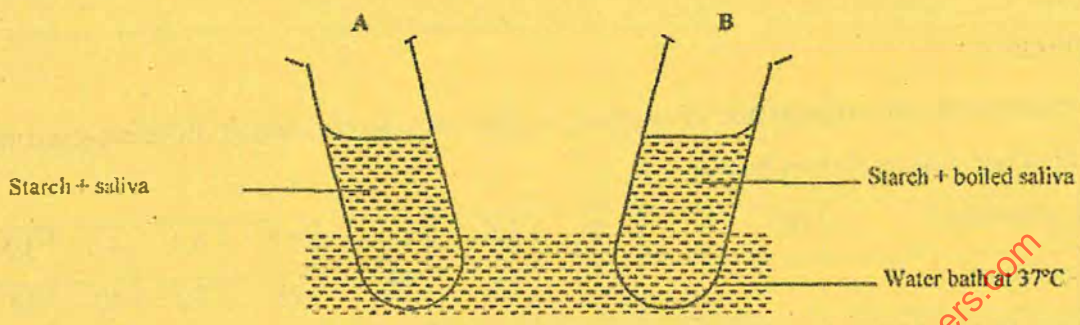
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2. In an experiment to investigate an aspect of digestion, two test tubes A and B were set up as shown in the diagram below.



a) The test tubes were left in the bath for 30 minutes. The content of each test tube was then tested for starch using iodine solution.

i) What was the aim of the experiment. (1mk)

ii) What results were expected in test tube A and B (2mks)

A

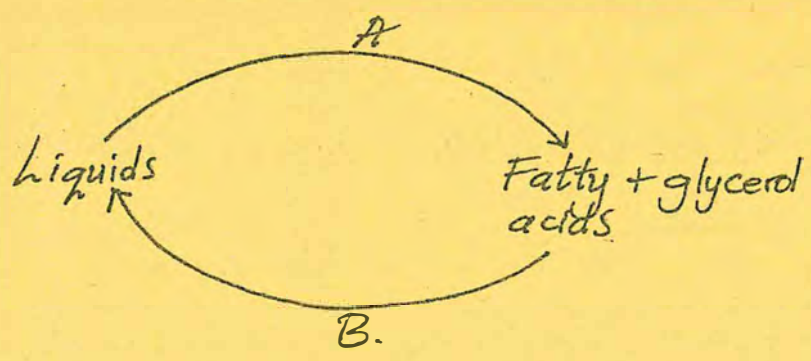
B

iii) Account for the results you have given in (b) above in test tube A and B. (2mks)

A

B

b) Below is a process that takes place along the mammalian digestive system.



i) Name the enzyme involved in process A

(1mk)

ii) Name part of the alimentary canal where the process B takes place.

(1mk)

iii) What causes scurvy in human beings.

(1mk)

SECTION C

13. In an experiment, rate of reaction of enzyme amylase was determined at different temperature:

Data obtained was as shown below.

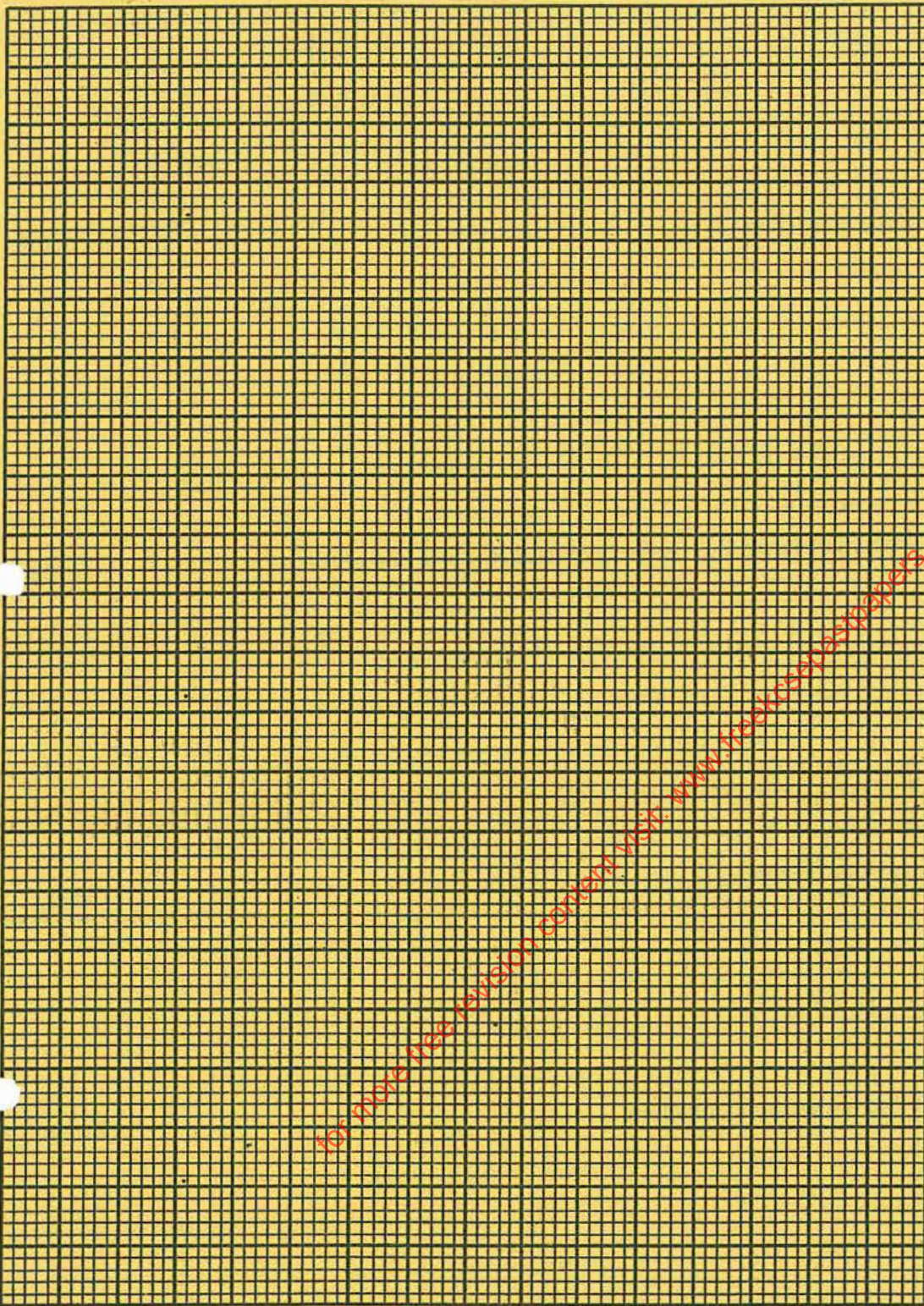
Rate of reaction	0.5	1.0	1.6	2.1	2.8	4.1	4.1	3.5	3.0
Temperature	5	10	15	20	25	30	40	50	60

a) Draw a graph of rate of reaction against temperature on the grid provided.

(6mrks)

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Rate of reaction Y axis and temperature x - axis



b) From the graph determine the rate of reaction of amylase at 18° c.

(1mk)

c) Account for the shape of the graph between

i) 5 and 30° c temperature

(3mrks)

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