

Name:Class.....

School:.....

Adm. No.....

BIOLOGY

2 HOURS

FORM ONE

Instructions

1. Write your name, class, admission number and school in the spaces provided.
2. Answer ALL questions in the spaces provided.
3. YOU WILL be penalized for wrong spelling especially technical terms.

Questions	Maximum Score	Student's Score
1-23	100	

1. Name the branch of biology that deals with the study of the following: -

a) Inheritance and variation. (1 Mark)

.....

b) Parasites. (1 Mark)

.....

c) Insects (1 Mark)

.....

d) Bacteria (1 Mark)

.....

e) Plants (1 Mark)

.....

2. State three importance of studying biology. (3 Marks)

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.....

.....

3. Name the taxonomic unit: -

i) Where members share the least number of characteristic. (1 Mark)

.....

ii) With fewest number of members. (1 Mark)

.....

4. State the functions of each of the following cell organelles. (5 Marks)

i) Golgi apparatus.

.....

ii) Mitochondria

.....

iii) Centrioles

c) State the use of the tool. (1 Mark)

.....

7. Below is a specialized cell.



a) Name the cell. (1 Mark)

.....

b) State one modification of the cell to its function. (1 Mark)

.....

c) Give the function of the above cell. (1 Mark)

.....

8. State three importance of locomotion. (3 Marks)

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.....

9. A student caught a grasshopper that was 4cm long and made a drawing of the same. He calculated the magnification of the drawing to be x2. Calculate the size of his drawing.

(2 Marks)

10. Name the elements that form each of the following compound. (3 Marks)

a) Lipids

.....

b) Proteins

.....

c) Carbohydrates

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11. Suggest a biological tool that is most suitable for collecting each of the following organisms:

i) A butterfly

(1 Mark)

.....

ii) Safari ants on a tree bark.

(1 Mark)

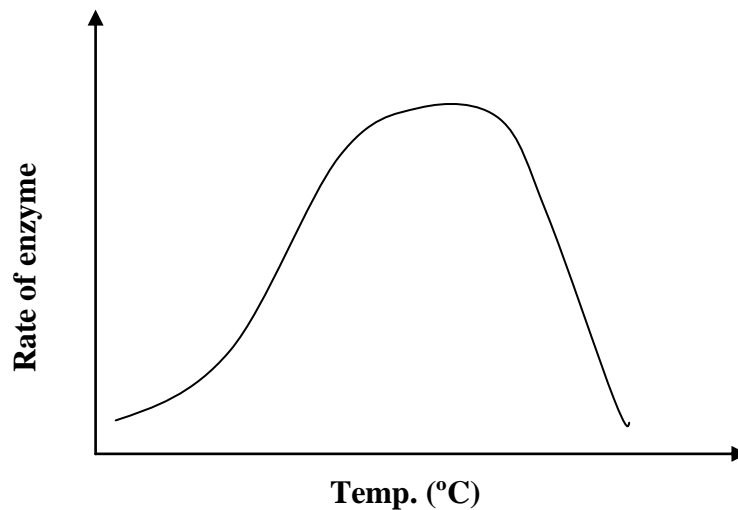
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iii) A fish

(1 Mark)

.....

12. The graph shows the effect of temperature on the rate enzyme-activity.



Account for the shape of the graph between:

i) AB (2 Marks)

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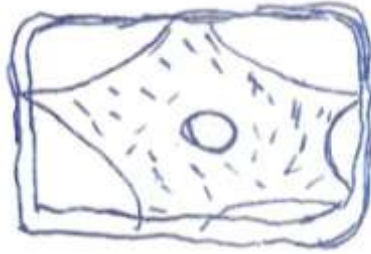
ii) BC (2 Marks)

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iii) CD (2 Marks)

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13. The diagram below shows a plant cell that was placed in a solution for 30 minutes.



a) State the type of solution the cell was placed. (1 Mark)

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b) Give the term used to describe the state of the cell. (1 Mark)

.....

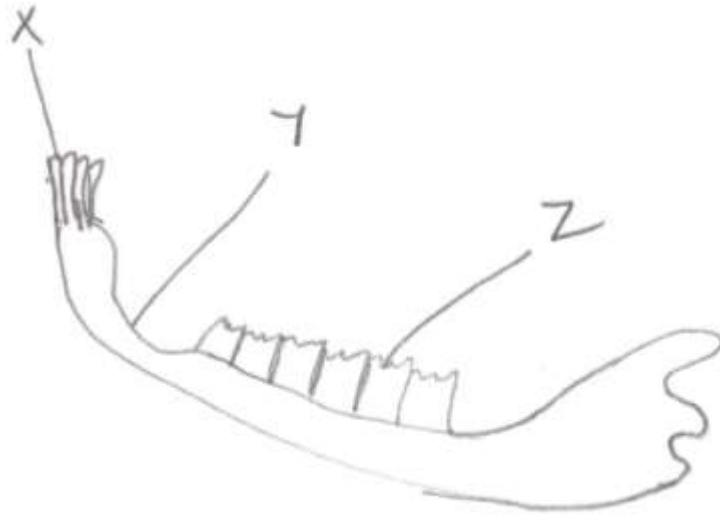
c) Explain the process that took place in the cell. (3 Marks)

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14. The diagram below represents the jaw of a certain mammal.



a) Name the mode of nutrition of the mammal whose jaw is shown above. (1 Mark)

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b) Name the teeth labeled X and Z. (2 Marks)

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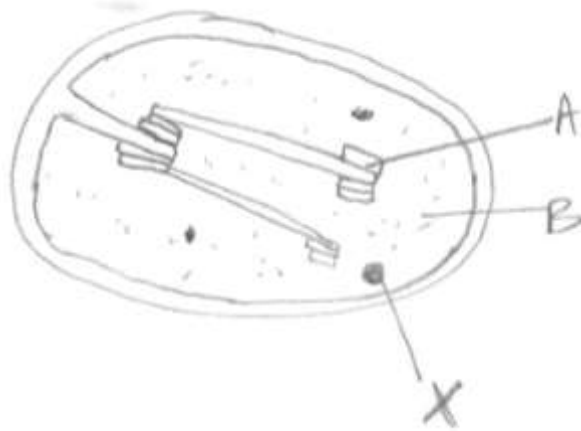
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c) Name the part labeled Y and state its role. (2 Marks)

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15. The diagram below represents a plant cell organelle.



a) Name the organelle. (1 Mark)

.....

b) Name the parts labeled A, B and X. (3 Marks)

A -

B -

X -

c) Identify the part, where Carbon (IV) oxide fixation occur. (1 Mark)

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16. a) What Vitamins would be lacking in a diet of someone suffering from; (3 Marks)

i) Scurvy

ii) Night blindness

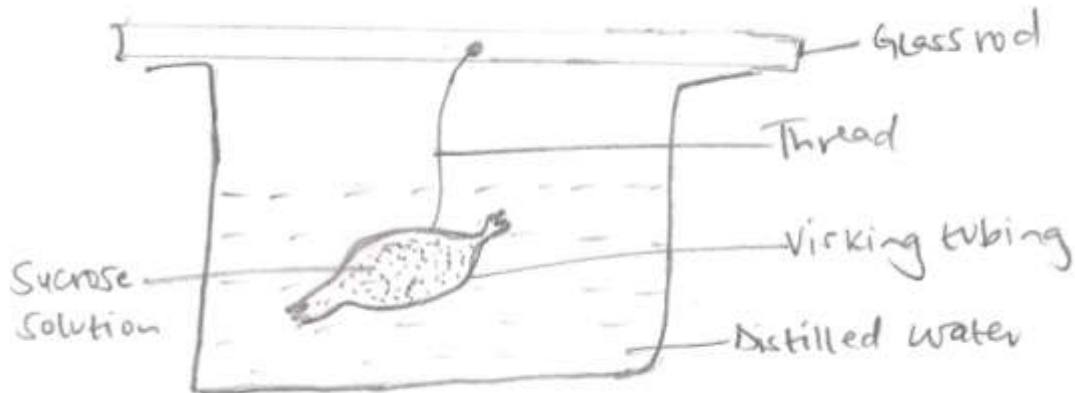
iii) Rickets

b) Which two minerals are important in the formation of chlorophyll. (2 Marks)

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17. An experiment was set-up as shown in the diagram below:



The set up was left for 30 minutes.

a) State the expected results. (1 Mark)

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b) Explain your answer in (a) above. (3 Marks)

.....

c) State the role of osmosis in plants. (3 Marks)

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18. In an experiment a leaf from a potted 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 water. Iodine solution was then added to the leaf on a white tile.

a) Why was the leaf boiled in:

i) Water (1 Mark)

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ii) Alcohol (1 Mark)

.....

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

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.....

ii) Give a reason for your answer. (1 Mark)

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.....

c) What was the aim of the experiment? (1 Mark)

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19. To which Kingdom does each of the following organisms below? (4 Marks)

a) Bacteria

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b) Mushroom

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c) Pine tree

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d) A lion

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20. a) State the physical and chemical process that occurs in the mouth during digestion.

(2 Marks)

Physical process

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Chemical process

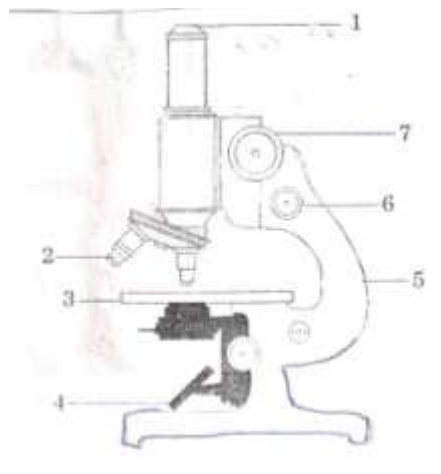
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b) Name the digestive juice secreted during digestion in the; (3 Marks)

i) Mouth cavity

.....
ii) Stomach

.....
iii) Duodenum

.....
21. a) Name the parts of the microscope labeled 1, 5 and 6. (3 Marks)



1.....
5.....
6.....

b) What is the function of the following parts; 2, 4 and 7? (3 Marks)

2.....
4.....
7.....

c) State two functions of a microscope. (2 Marks)

22. a) Name any three factors that determine energy requirements in human being. (3 Marks)

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b) Explain the following terms

i) Emulsification (1 Mark)

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ii) Digestion (1 Mark)

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23. a) State the function of co-factors and co-enzyme in a cell. (1 Mark)

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b) Give two examples of a co-factor and one of a co-enzyme. (3 Marks)

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