Name: _____ Adm No: _____Class: ___

Candidate's Signature: _____ Date: _____

BIOLOGY
FORM 2
END OF TERM 3
YEAR 2024
Time: 2HRS

END TERM 3 2024 EXAMINATIONS

Instructions to Candidates

ANSWER ALL QUESTIONS

1. Give the function of the following parts of a light microscope. (2 marks)

i. Diaphragm.

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ii. Condenser.

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2. *Plasmodium vivax* and *Plasmodium ovale* are transmitted by a mosquito. State with a reason whether two organisms can interbreed. (2 marks)

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……..……

3. Name the organelles that perform each of the following functions: (2marks)

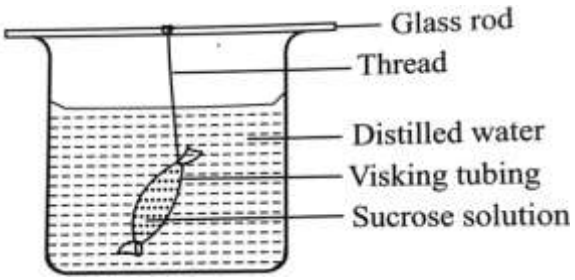
a) Digestion and destruction of worn out organelles.

……

b) Osmoregulation

……

4. An experiment was set up as shown in the diagram below.



The set-up was left for 30 minutes.

a. Name the process that is being investigated. (1mark)

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b. State the expected results. (2marks)

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c. Explain your answer in (a) above. (2marks)

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5. The action of ptyalin stops at the stomach. Explain. (2marks)

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……..…….

6. In an experiment to investigate a factor affecting photosynthesis, a leaf of a potted plant which had been kept in the dark overnight was covered with aluminum foil as shown in the diagram below,



The set up was kept in the sunlight for three hours after which a food test was carried out.

a. Which factor was being investigated in the experiment. (1 mark)

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b. Why was it necessary to keep the plants in the darkness before the experiment? (1 mark)

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c. What food test was carried out. (1 mark)

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d. State the results of the food test. (1 mark)

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e. Account for the results in (d) above. (1 mark)

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7. Explain how age as a factor determine the daily energy requirement in human. (2 marks)

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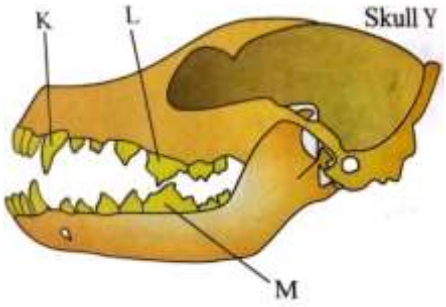
8. The diagram below 

represent skull obtained from an animal

i. State the special name given to the structures labelled L and M. (1 mark)

……

ii. state the likely diet of the animal from which the skull was obtained. (1 mark)

iii. Name the substance that is responsible for hardening of teeth. (1 mark)

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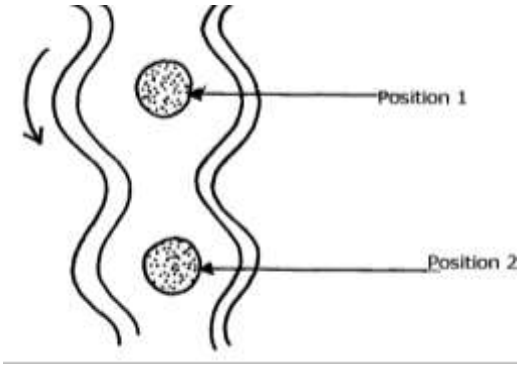
9. The diagram below shows how food boles move along the human oesophogus and the Intestine



(a) Identify the process illustrated in the diagram. (1 mark)

……

(b) Name **one** component of a person's diet that assists in the movement of food bolus from position 1 to position 2. (1 mark)

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10. Distinguish between transpiration and guttation. (2 marks)

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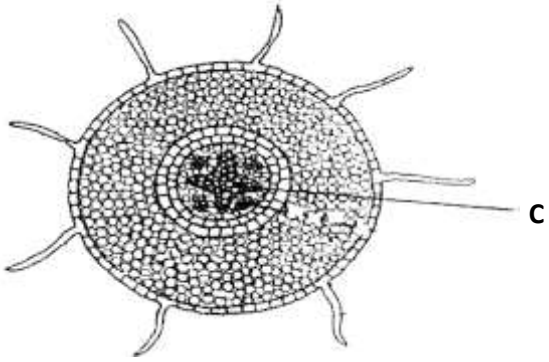
11. Name a disease that causes thickening and hardening of arteries. (1 mark)

……..……

12. The diagram shows a section through a plant organ.



a. From which plant organ was the section obtained. (1 mark)

……

b. Give **two** reasons form your answer in (a) above. (2 marks)

……

……

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c. How is the part labelled **C** adapted to its functions? (3marks)

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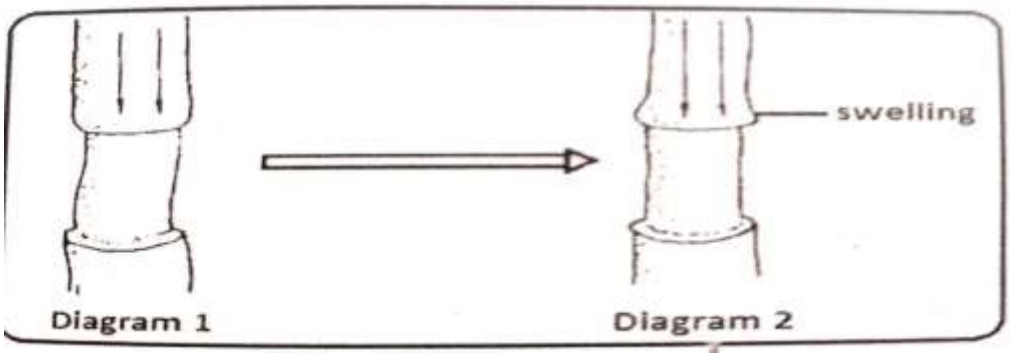
13. The diagram below represents an experiment that was used to investigate a certain process.



a) Name the process that was being investigated, (1mark)

……

b) Account for the swelling in diagram 2. (2marks)

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……

……

14. State the functions of each of the following parts of the nervous system in control of the heart beat

I. The vagus nerve. (1mark)

……

II. Sympathetic nerve. (1mark)

……

15. The diagram below shows single circulation in a fish

a. Write down the names of the parts labelled **V** and **T**. (2 marks)

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b. How is this type of circulation different from that found in man? (2 marks)

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c. Explain the **main** disadvantage of this type of circulation. (1 mark)

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16. Explain how red blood cells of mammals are **adapted** to their functions. (3 marks)

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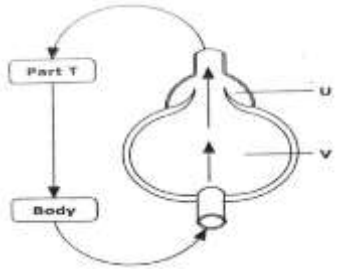
17. The diagram below shows a vertical section through a mammalian heart



i. Name the parts labelled **A, B, C** and **D**. (4 marks)

A-……..……B-……..……

C……...……D-……

ii. Use **arrows** to show the direction in which blood flows out of the heart. (2 marks)

iii. Explain why left ventricle has thicker walls than right ventricle. (2 marks)

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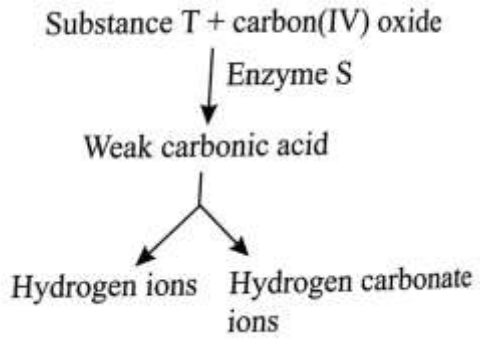
iv. Give **three** structural differences between A and B. (3 marks)

A	**B**



18. The diagram below illustrates the role played by red blood cells in the transportation of carbon (IV) oxide.

a. Name substance **T**. (1 mark)

……

b. Name enzyme **S** and state its role in the reaction. (2 marks)

……

c. Other than carbon (IV) oxide transportation in the red blood cells, name the other form of carbon (IV) oxide transportation in humans. (1 mark)

……

19. State **two** ways in which the heart muscles are special. (2 marks)

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20. (i) Name the type of circulatory system in insects. (1mark)

……

(ii) Name the openings in the chamber of the heart of an insect. (1mark)

……

21. Name the blood vessel that

i. Provides the liver with oxygenated blood. (1mark)

……

ii. Nourishes the cardiac muscles of the heart. (1mark)

……

22. State **two** functions of pericardium membrane. (2 marks)

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