**NAME:……………………………………………………ADM NO…………CLASS………….**

**OPENER EXAMINATION: TERM 1 2024**

BIOLOGY

FORM 3

TIME:2 HRS

**INSRUCTIONS**

**Answer All the questions in the space provided.**

1. Name the most appropriate tool that Biology students can use for collecting
2. Crawling animals (1mk)

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1. Flying insects (1 mk)

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1. State the name given to the study of:
2. Cells (1 mk)

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1. Classification of living organisms (1 mk)

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1. a) Define the term species (1 mk)

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1. A Tiger is known as Panthera Tigris
2. Identify two mistakes made in writing the scientific name (2 mks)

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1. Explain why a Leopard and a tiger cannot breed yet they belong to the same genus (1 mk)

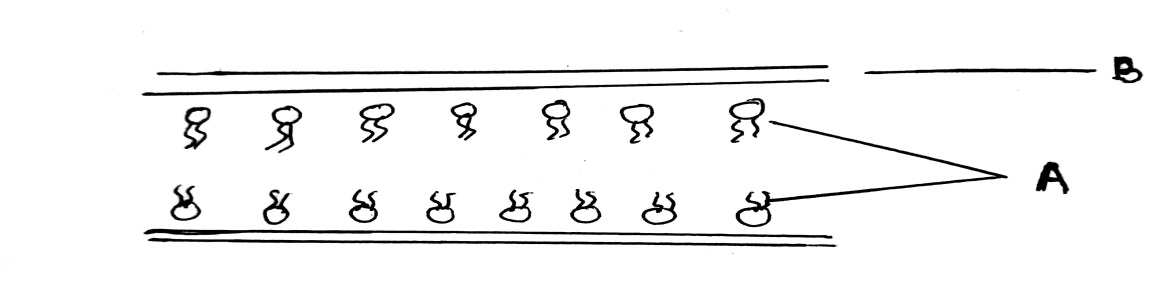
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1. A cell was magnified 200 times using a light microscope whose eye-piece lens magnification was X10. What was the magnification of the objective lens (3 mks)

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1. The cell structure below was observed under the light microscope



1. Identify the cell structure (1 mk)

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1. Name the labeled parts A and B (2 mks)

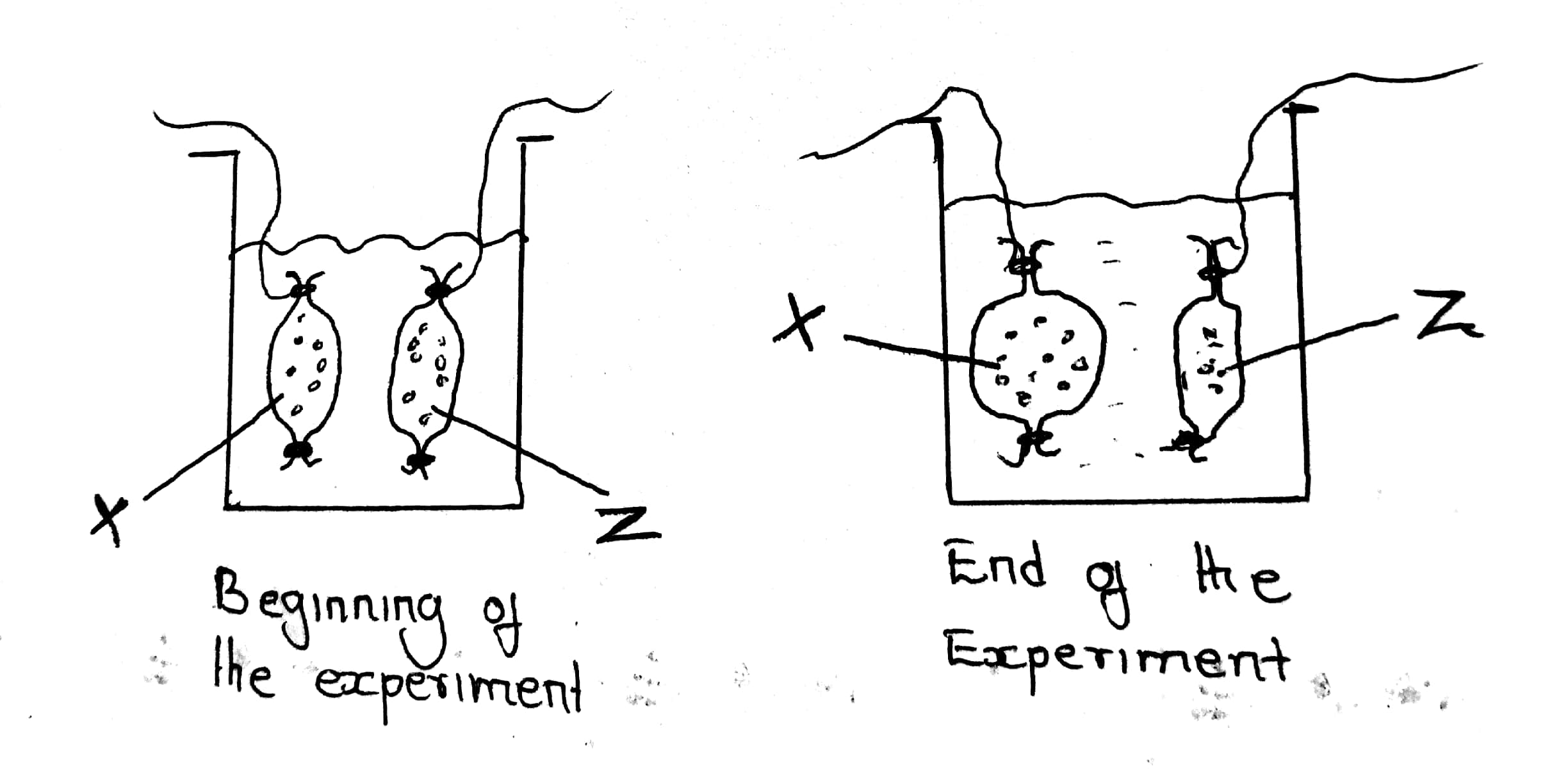
A…………………………………………………………………………………………………….

B ……………………………………………………………………………………………………

1. State one function of the above structure (1 mk)

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1. In an experiment equal amounts of three different sugar solutions were placed in the risking tubings X, Y and Z. the tubings were placed in a beaker of water containing 5% sugar solution. The set up was left for two hours. The results were as shown in the diagram below.
2. 
3. Name the process being investigated in the experiment (1 mk)

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1. Account for the observations made at the end of the experiment (3 mks)

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1. State three importance of the process named in (a) above in living organisms (3 mks)

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1. i) Name the carbohydrates that is (3 mks)
2. Found in abundance in mammalian blood

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1. Stored in mammalian liver

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1. Stored in plant seeds

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ii) List two importance of water in living organisms (2 mks)

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1. The enzyme pepsin and trypsin are secreted as inactive precursors:
2. What are the name of the precursors (2 mks)

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1. Why are they secreted in an inactive form (1 mk)

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1. State two structural and two environmental factors that affect the rate of transpiration
2. Structural (2 mks)

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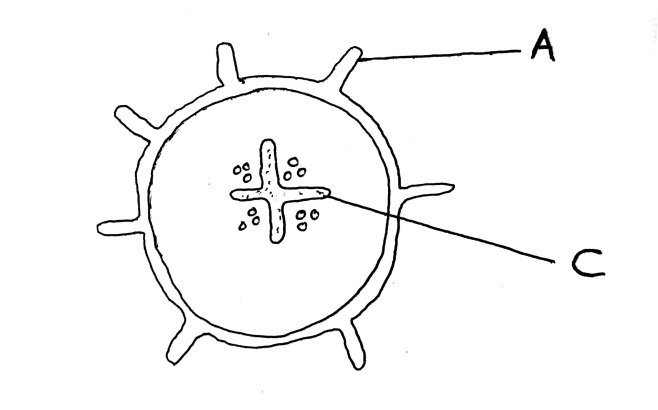
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1. Environmental (2 mks)

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1. The diagram below is a transverse section of a certain part of a dicotyledonous plant



1. Which part of the plant was the section made from (1 mk)

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1. Give reasons for your answer (1 mk)

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1. State the functions of the parts labeled A and C (2 mks)

A…………………………………………………………………….……………………….…...………………………………………………………………..……………………………………….

C…………………………………………………………………….……………………….…...………………………………………………………………..………………………………………

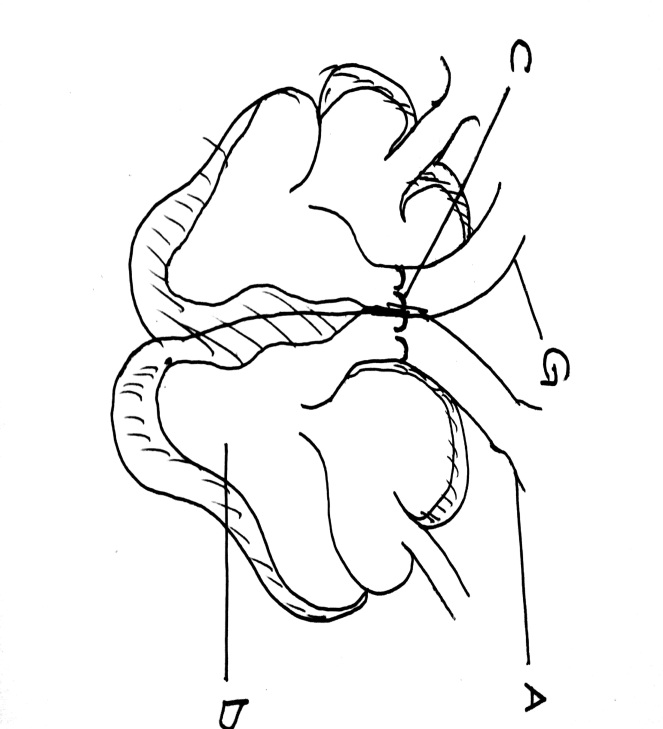
1. Give an example of an animal with (2 mks)
2. Open circulatory system

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1. Closed circulatory system

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1. The diagram below show the internal structure of a mammalian heart



1. Using arrows show the direction of blood flow in and out of the heart ( 2mks)

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1. Name the parts labeled (2 mks)

A…………………………………………………………………….……………………….…...…

C…………………………………………………………………….……………………….…...…

1. The muscular wall of chamber D is at least three times thicker than the wall of chamber E. give a reason for this difference (1 mk)

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1. Name two special characteristics of heart muscles which distinguishes it from other parts of muscles (2 mks)

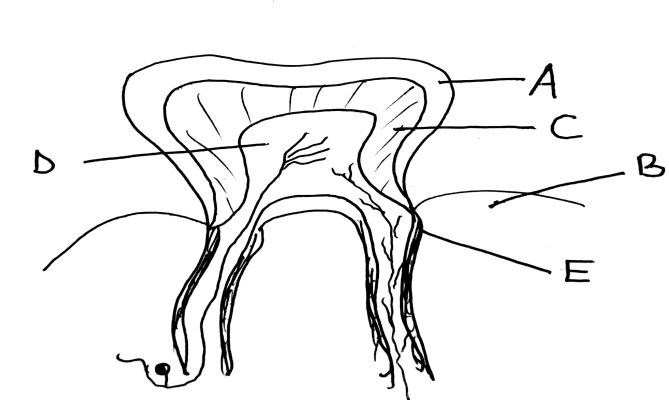
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1. In what way does the artery labeled G differ from other arteries in the body (1 mk)

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1. The figure below is a diagram of a vertical section of a mammalian tooth



1. Name the parts labeled A – F (5 mks)

A……………………………………….. D………………………….………………….

B……………………………………….. E……………………………………………...

C ………………………………………..

1. How are the structures labeled A and D adapted to their functions (2 mks)

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1. List down three ways of preventing teeth diseases (3 mks)

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1. a) Give two reasons why clotting of blood is important (2 mks)

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b) Name one enzyme and one metal ion that are required in the blood clotting process (2 mks)

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c) Explain why excessive bleeding may lead to death of a patient (3 mks)

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1. Explain why deficiency of vitamin K leads to excessive bleeding even from small cuts (1 mk)

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1. State and Explain five factors that determine energy requirements in human beings (10 mks)

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17. Explain how the blood vessels are involved in thermo-regulation (4mks)

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18. Give 5 parts of a light microscope and their functions (10mks)

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19. Describe inhalation and exhalation in mammals (10mk)

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