BIOLOGY PP1

231/1

**FORM THREE**

TIME: **2HRS**

NAME……………………………………………………………………..ADM………………STREAM………….…….

NAME OF SCHOOL ………………………………………………………………….DATE……………………….

END OF TERM I, 2023 EXAMINATIONS

INSTRUCTIONS

* Write your answers correctly and clearly in the spaces provided
* Be keen on Spelling of Technical Terms

**FOR OFFICIAL USE**

|  |  |
| --- | --- |
| TOTAL MARKS | STUDENT’S SCORE |
| 80 |  |

1. Give **TWO** unique features of members of Kingdom Monera (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. The diagram shown below represents a cell



Identify **TWO** reasons why this is a plant cell (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Name the organelle found in high number in the following structures (3mks
2. Palisade ………………………………………………………………………………...
3. Goblet cells …………………………………………………………………………….
4. Muscle ………………………………………………………………………………….
5. Account for the following observations

i) A plant cell does not burst when placed in a hypotonic solution (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

ii) An amoeba does not burst when placed in distilled water (2mks

………………………………………………………………………………………………………………………………………………………………………………………………

ii) Submerged hydrophytes have highly dissected leaves (2mks

………………………………………………………………………………………………………………………………………………………………………………………………

1. The experimental set up shown below was used to study a physiological process



1. State the function of oil in the experiment shown above (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. Account for the observation made in **A** after the experiment (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. What was the role of set up **B** in the experiment? (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. a) Explain why plants in low altitude experience higher rate of growth than those in higher altitude areas (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

b) A person climbing a mountain experiences increase in number of erythrocytes in their blood. Explain (2mks

………………………………………………………………………………………………………………………………………………………………………………………………

1. The following are the blood vessels in a human body



1. Which letter represents the blood vessel that: (3mks

i) Experiences pulsating action……………..…………………………………………..

ii) Has valves along its length ………………………………………………………….

iii) Supplies blood to every tissue of the body ,,,……………………………………….

1. Why is vessel **B** the only one that experiences ultrafiltration? (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. a) Define the term homeostasis (1mk

………………………………………………………………………………………………………………………………………………………………………………………………b) State **TWO** ways plants expel their metabolic waste products

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Explain how sunshine contributes to having strong teeth (3mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. State **TWO** roles of mucus in the stomach (2mks

………………………………………………………………………………………………………………………………………………………………………………………………

1. The following is a set up used in a biological study. After a while a starch test was done on the leaf labelled **C** and the result is shown on the detached leaf



C

1. What was the aim of the experiment? (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. Which colour observation on iodine solution informed the following conclusion?

i) Presence of starch (1mk

……………………………………………………………………………………………………………………………………………………………………………………

ii) No starch (1mk

……………………………………………………………………………………………………………………………………………………………………………………

1. Account for the observation made on part of Leaf **C** that was inside the bottle (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Name the parasites that cause the following human diseases (2mks
2. Bacterial human Pneumonia….……………………………………………………….
3. Cholera ………………………………………………………………………………..
4. The diagram shown below represents a structure found in plant leaves



1. State the importance of part **C** to photosynthesis (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. State **TWO** unique structural features found in cell **B** and not in **A** (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Use the diagram shown below to answer the questions that follow



1. Give the identity of the instrument shown above (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. In which environment is the instrument used? (1mk

………………………………………………………………………………………………………………………………………………………………………………………………

1. The following are the three types of cells found in human blood



 **P Q R**

a) State **TWO** roles of enzyme released when cell **R** bursts on exposure to air (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

b) Give **TWO** ways cells represented by **Q** undertake their functions in the body (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Explain why there were more bubbles in set up **B** than **A** in the experiment shown below



………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..(2mks

1. Use features shown of a common animal below to answer the questions that follow



1. Give **TWO** reasons to show that the animal above is carnivorous (2mks

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. i) Name the class to which the animal above belong (1mk

………………………………………………………………………………………………

ii) Give **TWO** reasons for your answer in bi) above (2mks

………………………………………………………………………………………………………………………………………………………………………………………………

1. In a laboratory controlled experiment, students found that cells of a given tissue utilized 30 cm3 of Oxygen and 20 cm3 of Carbon (IV) Oxide was released during the same time.
2. Calculate the Respiratory Quotient (2mks

………………………………………………………………………………………………………………………………………………………………………………………..…….………………………………………………………………………………………………

1. Why is fat not a desired respiratory substrate yet it yields a lot of energy (2mks

………………………………………………………………………………………………………………………………………………………………………………………..…….………………………………………………………………………………………………

1. The diagram below shows a section of a plant organ



1. State the function of part labelled **e** (1mk

………………………………………………………………………………………………

1. Give **TWO** reasons to show that the section above was obtained from a dicot root

………………………………………………………………………………………………………………………………………………………………………………………..(2mks

1. Name the other type of tissue **d** apart from xylem vessels (1mk

……………………………………………………………………………………………

1. The specimens shown below were used by learners for a taxonomic study.

 

 **Housefly Dragon fly**

1. Samson indicated that the two specimen belonged to class Insecta. Give a reason.(1mk

………………………………………………………………………………………..……

1. Use wings to construct a one-step dichotomus key for identification of the specimen

………………………………………………………………………………………..…….……………………………………………………………………………………..…(2mks

1. The following graph was obtained after an experiment on potato strips



1. i) Which term is used to describe the cell when it experiences -15% change in mass?

………………………………………………………………………………………..(1mk

ii) From the graph give the normal cell sap concentration of the potato cells

………………………………………………………………………………………..(1mk

1. Account for the change in mass of potato strips at **Q**

………………………………………………………………………………………..…….………………………………………………………………………………………………………………………………………………………………………………………(2mks

1. a) Name the part of the brain that regulates breathing (1mk

………………………………………………………………………………………………

b) Describe how intercostal muscles influence rib cage movements during inhalation

……………………………………………………………………………………………………………………………………………………………………………………...…….………………………………………………………………………………………………………………………………………………………………………………………..…(4mks

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

………………………………………………………………………………………………..………………………………………………………………………………………..……

b) Where do the following take place in the chloroplast? (2mks

i) Carbon fixation ……………………………………………………………………. …… ii) Photolysis ……………………………………………..…………..…………………….

1. a) State **TWO** roles of enzymes in the body (2mks

……………………………………………………………………………………………………………………………………………………………………………..…………..……………………………………………………………………………………………………

b) Identify **TWO** factors that reduce rate of enzyme controlled metabolic reactions (2mks

………………………………………………………………………………………………………………………………………………………………………………………..…..…………………………………………………………………………………………………

THE END

BIOLOGY IS STILL THE STUDY OF LIFE.

**LOVE IT MORE!!**