

THE UNITED REPUBLIC OF TANZANIA
PRESIDENTS OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT



MWANZA REGION
REGIONAL FORM TWO MOCK ASSESSMENT

033

BIOLOGY

Time: 2:30 Hours

Year: 2025

INSTRUCTIONS

1. This paper consists of sections A, B and C with a total of ten (10) questions
2. Answer all questions in the space provided
3. Section A carries **fifteen (15)** marks, section B **seventy (70)** marks and section C carries **fifteen (15)** marks
4. Write in blue or black ink. Draw in pencil
5. Write your examination number on the top right corner of every page of this question paper.

For Examiners' Use Only		
Question Number	Score	Examiner's Initial
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
Total		
Checker's Initial		

This paper consists of 8 printed pages

Answer **all** questions in this section.

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- (i) During a first aid lesson, the teacher explains that certain blood vessels must handle strong pressure from the heart. Which type of blood vessel is structurally adapted to this with a thick muscular wall and a narrow lumen?

B. Capillary

()

D. Artery

- ### A. Asthma

B. Bronchitis

()

D. Influenza

- A. Washing hands before eating

B. Cooking food in hot rice cooker ()

C. Disposing food leftovers in covered containers

D. Storing uncooked fish in deep freezer.

- | | Translocation of
sugars | Transports
water | Transports
amino acids |
|---|----------------------------|---------------------|---------------------------|
| A | Xylem | Phloem | Xylem |
| B | Phloem | Xylem | Phloem |
| C | Xylem | Phloem | Xylem |
| D | Phloem | Xylem | Xylem |

()

- ### A. HIV/AIDS

B. Malaria

()

C. Plague

D. Tuberculosis

-

A. Leucocyte

B. Erythrocyte

()

C. Platelet

D. Lymphocyte

- ### A. Vacuole

B. Cytoplasm

()

C. Nucleus

D. Tonoplast

- (viii) A farmer growing vegetables in a greenhouse wants to maximize photosynthesis during daylight. What are the essential inputs needed for this process to occur efficiently?
- A. Water and chlorophyll B. Water and carbon dioxide ()
 C. Chlorophyll and sunlight D. Carbon dioxide and chlorophyll
- (ix) During a science nature walk, students observe different animals and plants in their environment. Based on what they see, which of the following are features shared by all living organisms?
- A. Nutrition and photosynthesis B. Excretion and coordination ()
 C. Excretion and digestion D. Excretion and photosynthesis
- (x) At a botanical garden, a guide explains that the edible onion is scientifically named *Allium cepa*. What does the second word in this name (*cepa*) represent in classification?
- A. Family B. Genus ()
 C. Species D. Order

2. Match the descriptions in **List A** with the correct human respiratory structures from **List B** by writing the letter of the correct answer below the item number in the table provided.

List A	List B
(i) Having ability to manufacture food from inorganics.	A Animals
(ii) Get their food supply from a variety of sources	B Arch monerans
(iii) Have both living and non-living characteristics	C Fungi
(iv) Non-motile and are heterotrophs	D Monerans
(v) Their nuclear materials are suspended in cytoplasm	E Plants
	F Protoctists
	G Viruses

Answers

List A	(i)	(ii)	(iii)	(iv)	(v)
List B					

SECTION B: (70 MARKS)

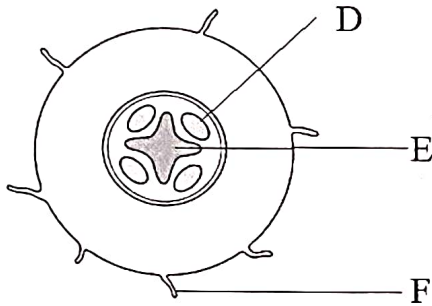
Answer **all** questions in this section.

3. (a) Imagine you are on a school trip and a classmate gets a small injury.
 Explain the importance of having a First Aid Kit in the vehicle.
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- (b) As a student leader, outline three (3) strategies schools can implement to reduce accidents on school grounds.
- (i)
-
- (ii)
-
- (iii)
-

- (c) Your school First Aid Kit contains **Gentian violet**, **Methylated spirit**, and **iodine tincture**. Explain the specific uses of each of these components.

- (i)
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- (ii)
.....
- (iii)
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4. Study **figure 2** showing a cross section of a plant root.



- (a) You are asked to help a fellow student identify parts in the laboratory. Name the parts labeled **D**, **E**, and **F**.

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- (b) As a student conducting a plant physiology experiment; describe the functions of parts **D**, **E**, and **F** in the root.

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- (c) During a science project, your group investigates how water moves from roots to leaves in a plant.

- (i) Mention **two (2)** environmental conditions that affect the rate of transpiration.

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- (ii) State **three (3)** significance of transpiration process to plants.

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5. (a) Differentiate between **immunity** and **health**.

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(b) A health officer visits your school and asks you to explain types of immunity. Provide at least **four (4)** points.

(i)

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(ii)

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(iii)

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(iv)

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(c) During a science fair, you are presenting on infectious diseases. Identify the causes of the following:

(i) Cholera:

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(ii) Meningitis:

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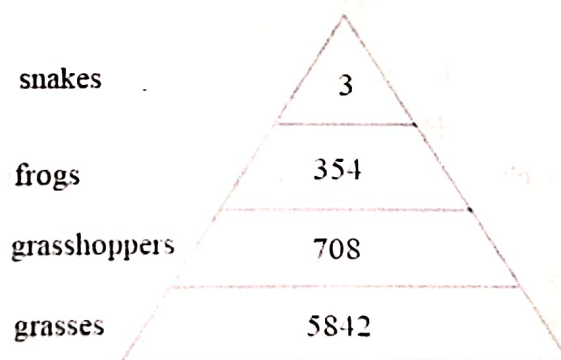
(iii) Bilharzia

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(iv) Syphilis

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6. The Figure below shows a pyramid of numbers in a food chain. Study it carefully then answer the questions that follow:



(a) Write down a food chain for this pyramid.

(b) How many trophic levels does the pyramid possess?

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(c) Locate the organism to each trophic level.

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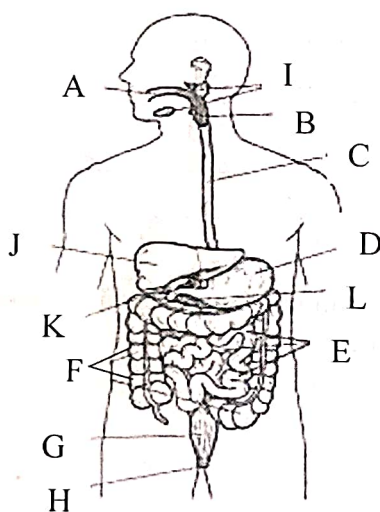
(d) Explain briefly how grasses make food for the grasshoppers.

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7. (a) During a kitchen science experiment, a student mixes protein with lipase and notices no digestion occurs. Explain why lipase cannot break down proteins.

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(b) Study the figure below carefully then answer the following questions.



Identify the parts which are responsible for the following functions:

(i) Trypsin acts:

(ii) Production of bile:

(iii) Production of gastric juice:

(iv) Digestion of maltose:

(c) Explain how enzymes of the digestive system are affected by temperature.

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8. (a) During a science club discussion, your teacher shows you a model of the human respiratory system. Based on your understanding, explain the roles of the following parts found in the trachea:

(i) Capillaries

(ii) Cilia

(iii) Cartilage

(iv) Goblet cells

(b) You are conducting a gardening experiment and you notice your plants are not growing well. Discuss **three (3)** reasons why the process of gaseous exchange is essential to the health of your plants.

(i)

(ii)

(iii)

(c) In a class practical, you are investigating how energy is released in living cells. Write a word equation that shows how glucose is broken down to release energy in cells.

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9. (a) Your school is planning to renovate the science laboratory. As a student representative, explain why the following qualities are necessary for a good working environment in the lab:

(i) Good ventilation:

(ii) Adequate space

(iii) Proper light:

(iv) Sources of heat:

(b) State **four (4)** rules in order to ensure safety in the laboratory.

(i)

- (ii)
- (iii)
- (iv)
- (c) During a school health check-up and science experiment, different body and physical measurements are taken. Identify the appropriate instruments used to measure:
- (i) Pulse rate:
- (ii) Temperature:
- (iii) Mass
- (iv) Length:

SECTION C: (15 MARKS)

Answer question **ten (10)** in this section.

10. In your school's career week, you are asked to explain how Biology connects with other subjects. Describe **six (6)** ways in which the knowledge of Biology is useful in other fields of study.

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