

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT



LAKE ZONE FORM FOUR MOCK EXAMINATION
(GEITA, KAGERA, MARA, SIMIYU, SHINYANGA AND MWANZA)

033/1

BIOLOGY 1

(For Both School and Private Candidates)

Time: 3Hours

Year: 2025

INSTRUCTIONS

1. This paper consists of sections A, B and C with a total of **eleven (11)** questions
2. Answer **all** questions in section A and B and only **two (2)** questions from section C.
3. Section A carries **sixteen (16)** marks, section B carries **fifty-four (54)** marks and section C carries **thirty (30)** marks
4. Except for the diagrams which must be drawn in pencil, all writings should be in blue/black ink.
5. Communication devices and any unauthorized materials **are not allowed** in the examination room.
6. Write your Examination Number on every page of your answer booklet(s).

This paper consists of 4 printed pages

SECTION A: (16 MARKS)

Answer all questions in this section.

1. For each items (i) – (x) choose the correct answer from the given alternatives and write its letter beside the item number in the answer booklet provided.

(i) Which of the following refers to the process where a cell divides into two identical cells

- A. Cytokines
B. Gametogenesis ()
C. Mitosis
D. Meiosis
E. Oogenesis

(ii) In crossing a homozygous recessive with heterozygous individual, what is a chance of obtaining an off-spring with homozygous recessive phenotype?

- A. 75%
B. 25% ()
C. 50%
D. 100%
E. 80%

(iii) All of the following are functions of human skeleton, except

- A. Support
B. Protection ()
C. Transport
D. Shape
E. Locomotion

(iv) Chickens and cats are able to maintain constantly body temperature. Therefore, are described as

- A. Homeotherms
B. Poikilotherms ()
C. Ectotherms
D. Regulators
E. Cold blooded animals

(v) Which of the following is the proper method for disposing plastic bottles?

- A. Landfills
B. Incineration ()
C. Burying
D. Recycling
E. Pit latrine

(vi) Which of the following is among of the product of anaerobic respiration in plants?

- A. Ethanol
B. Lactic acid ()
C. Oxygen
D. Hydrogen
E. Water

(vii) When the first day of menstruation was 8th April, on which dates is a woman of 28 days cycle most likely to ovulate?

- A. 26th March
B. 22nd April ()
C. 5th May
D. 16th April
E. 21st April

- (viii) Magnesium is one mineral required for normal growth of the plants including the formation of green pigment. What will happen if the plant lacks this mineral
- A. The plants will die
 - B. The plants will get premature aging
 - C. The plants will reduce the uptake of essential minerals ()
 - D. The plant will not photosynthesize
 - E. Premature leaves will drop
- (ix) The theory of use and dis-use was put forward by
- A. Aristotle
 - B. Pastors ()
 - C. Lamarck
 - D. Darwin
 - E. Mendel
- (x) Medical waste is described as
- A. Biohazardous
 - B. Reusable materials ()
 - C. Biodegradable
 - D. Recyclable
 - E. Explosive

2. Match the descriptions of the LIST A with their corresponding in LIST B by writing the letter of the correct responses beside the item number in the answer sheet provided

LIST A	LIST B
(i) A disease that occurs over a wide geographical area	A. Disease
(ii) The invasion of the body by a disease-causing micro-organism	B. Pathogen
(iii) A way of inducing resistance against an antigen	C. Infection
(iv) A condition that affects the health of the body and is characterized by a certain symptom	D. Pandemic
(v) A micro-organism that can affect health if it gets into the body.	E. Genetic disorder
(vi) Sickle cell anaemia is an example of	F. Endemic
	G. Vectors
	H. Vaccination

SECTION B: (54 MARKS)

Answer all questions in this section

3. Form four students were provided with the solution S₁ in a beaker, to identify the food substance(s) present in solution S₁, where the solution S₁ turned into blue-black colouration after treated with iodine solution
- (a) Name the food substance present in solution S₁
 - (b) Name four (4) natural sources of food substance mentioned in (a) above

- (c) Explain two functions of the food substance named in (a) above
- (d) Name the parts where the food substance mentioned in (a) above is digested in alimentary canal.
4. (a) Describe the function of any three specialized plants cells
(b) In three points; how plant cell differs from animal cells.
5. In animals sexual reproduction is widely found in unicellular organisms while in plants occurs when there is the growth of a new plant from stem, leaf, roots or bud. With examples, explain three (3) forms of asexual reproduction in living organism.
6. (a) In three points, explain the importance of gaseous exchange in plants.
(b) How respiratory surfaces are adapted to its functions. Give three points
7. Describe the secondary sexual characteristics that develop during adolescence in boys and girls. Give three points from each side.
8. A woman with blood group A, claims that a man of blood group AB is the father of her child. A blood test reveals that the child's blood group is O. Is it possible that the woman's claim is true? Explain your answer.

SECTION C: (30 MARKS)

Answer only two (2) questions from this section

9. Different animals have different ways of regulating their body temperature. Explain four (4) ways by behavioral means where poikilotherms can adjust their body temperature.
10. The members of class Mammalia are both advantageous and disadvantageous to human being and other organisms. Use six (6) points, explain the economic importance of mammals.
11. The human body has defense systems that either prevents micro-organism from entering the body or combating them when they manage to enter. With four (4) points explain the natural body defense system.