

**THE UNITED REPUBLIC OF TANZANIA  
PRESIDENT'S OFFICE  
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT  
SHINYANGA MUNICIPAL COUNCIL  
FORM FOUR MUNICIPALITY MOCK EXAMINATION – MAY, 2023**

**033/1**

**BIOLOGY 1**

**Time: 3:00 Hours**

***Monday, 22<sup>nd</sup> May, 2023 P.M***

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**Instructions**

1. This paper consists of section A, B and C with total eleven (11) questions.
2. Answer all questions in section A and B and two (2) questions in section C
3. Cellular phones and any authorized materials are not allowed in the examination room.
4. All writing should be written in blue or black ink except for diagram should be drawn in pencil.
5. Write your examination number on every page of your answer sheet(s)

### SECTION A (16 Marks)

Answer **all** questions from this section

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

- i. Which of the following structure is a site for respiration:-
  - A. Nuclear
  - B. Ribosome
  - C. Cell wall
  - D. Chloroplast
  - E. Mitochondria( )
  
- ii. Lipase enzymes are mainly contained in which digestive secretion?
  - A. Hydrochloric acid'
  - B. Gastric Juice
  - C. Bile Juice
  - D. Salva
  - E. Intestinal( )
  
- iii. A term which describe a condition of plant cell that has too much water
  - A. Osmosis
  - B. Haemolysis
  - C. Turgidity
  - D. Glycolysis
  - E. Plasmolysis( )
  
- iv. At which stage do meiosis new spindle fibers are formed
  - A. Metaphase I
  - B. Prophase I
  - C. Anaphase I
  - D. Anaphase II
  - E. Telophase II( )
  
- v. A Biologist discovered a new cell culture the new cell has a disstruct cell wall but it did not have definite nucleus, the cell is mostly likely to be:-
  - A. Fungi
  - B. Protozoa
  - C. Virus
  - D. Eukaryotic
  - E. Prokaryotic( )
  
- vi. What does the concept of good health implies:-
  - A. A state of physical sexual and mental fitness
  - B. Being physically mentally and socially fit
  - C. A state of family .well being
  - D. Reproductive health and family care
  - E. State of taking good meal regularly( )
  
- vii. At which part of the plant does growth mainly occur?
  - A. Leaves

- B. cambium
- C. Roots
- D. Tips of roots and shoots
- E. Stem ( )

- viii. Involuntary muscles that are capable for relaxing and contract continuously without fatigue easily is known as:-
- A. Skeletal muscles
  - B. Biceps muscle
  - C. Smooth muscles
  - D. Cardiac muscle
  - E. Triceps muscles ( )

- ix. Epiphytes are organism that grow on the tree branches and normally do not harm the tree, therefore these organisms undergo which mode of feeding?
- A. Holozoic
  - B. Parasitism
  - C. Saprophytism
  - D. Mutualism
  - E. Commensalism ( )

- x. Body immune system which develops after infection and remains in the body permanently is known as:-
- A. Natural active immunity
  - B. Natural passive immunity
  - C. Acquired passive immunity
  - D. Artificial passive immunity
  - E. Artificial active immunity ( )

2. Match the functions of the following parts of the brain in **list A** with their corresponding parts in **list B** by writing the letter of the correct response beside the item number in the answer sheet provided.

LIST A	LIST B
i. It relay information between the forebrain and eyes _____	A. Cerebellum
ii. It controls body balance and posture _____	B. Olfactory lobe
iii. It controls breathing digestion, dilation and contraction of blood vessels _____	C. Hypothalamus
iv. It coordinates and control the autonomic nervous system _____	D. Mid-brain
v. It is responsible for speech memory, intelligence and imagination _____	E. Medulla oblongata
vi. It links between the central nervous system and endocrine system _____	F. Cerebrum
	G. Pituitary gland

### **SECTION B (54 Marks)**

Answer **all** questions in this section

3. a) What do you understand by the term
- Biology laboratory
  - An accident
- b) An engineer needs to approve a building to be used as a Biology laboratory. List four (4) qualities which she or he must consider in order for that building to be considered as a good Biology laboratory.
4. Mr. Juma got a car accident and was badly injured. During the first aid Mr. Mabula put on glove, took a cotton wool and give him painkiller, what was the uses of:-
- gloves
  - cotton wool
  - painkiller
5. Explain the statements:-
- Why is not allowed to sleep in the room with burning charcoal burner.
  - Why the person who climbing high mountain face difficult on breathing.
6. a) Define the following terms
- Gene
  - Phenotype
- b) In an experiment, beans seeds having a smooth seed coat were crossed with beans having wrinkled seed coat. All seed obtained in the first filial generation (F1) and a smooth seed coat. Use a genetic cross to find out the formation of (F1) individuals.
7. As a student of form four, distinguish between hypogeal seed germination from epigeal seed germination, give two (2) points.
8. (a) Explain why
- Desert animals have long loop of Henle and fewer glomeruli
  - The proximal convoluted tube is coiled
- (b) (i) What happens to excess amino acid in the liver  
(ii) Name three (3) excretory products from plants that are useful to human

### **SECTION C (30 Marks)**

Answer **two (2)** questions for this section

9. Plants manufacture their own food. What is the name given for that process, and elaborate any three (3) raw materials and three (3) products given out on that process? And give out the equation of that process
10. Human being is among of the homothermic organism, describe how homothermic organisms regulate their body temperature during hot and cold condition. Any six (6) points needed.

11. Most of young people today practice risky behavior thinking that it is a modern style of life. This is wrong concept. Discuss the factors that contribute to the risky behavior among young people in the society and their consequences. (Any six (6) points).