

The United Republic Of Tanzania

President's Office

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

RUVUMA REGION

SONGEA MUNICIPAL COUNCIL

FORM THREE MIDTERM EXAMINATION MARCH 2024

033

BIOLOGY

TIME: 2½ Hours

March, 2024

Instructions

- (i) This paper consists of Sections A, B and C with total of 15 questions
- (ii) Answer **ALL** questions in sections A and B and two questions in section C of which question 13 is compulsory
- (iii) All writings should be in. blue or black pen except drawings that must be in pencils
- (iv) Cellular phones and Calculators are not allowed in the Examination room.
- (v) Write your **Examination number** on every page of your booklet(s).

SECTION A (10 Marks).

Answer All questions in this sections.

1. For each of the items i) -(x). choose the correct answer from the given alternative and write its corresponding answer booklet.

- (i) Which component of the nervous system receives impulses from receptors?
(A) Response (B) Effector (C) Relay
(D) Motor (E) Coordinator
- (ii). Which of the following is the proper method for disposing plastic bottles?
(A) Land fill (B). Incineration (C). Burying
(D) Recycling (E) Pit latrine
- (iii). Which process allows absorption of water and mineral salts from the soil in plants?
A. Diffusion B. Osmosis C. Irritability
D. Mass flow E. Regulation
- (iv). Why spiders and scorpions are placed in the same class?
A: They have three pairs of legs. B: They have a pair of wings
C: They have a pair of chelicera D :They have three body parts
E: They have two pairs of antennae
- (v) .Which food chain represents the correct flow of energy in the ecosystem?
A.Grasses ' Hawk - Lizard ' Grasshopper
B.Lizard ' Grasses ' Grasshopper - ' Hawk
C.Grasses ' Hawk ' Grasshopper ' Lizard
D.Grasses ' Grasshopper' Lizard ' Haw
- (vi). A blood vessel which takes away blood from the glomerulus is narrower than the blood vessel which enters blood into the glomerulus. What does it imply with respect to urine formation?
(A).Creates low pressure for efficient filtration of blood
(B). Increases surface area for selective reabsorption
(C) .Builds up high pressure for ultra-filtration of blood
(D). Reduces diffusion distance for faster filtration
(E) .Creates high pressure for ultra-filtration of urine
- (Vii).Which group represents only the living things?
A .dog, frog, stone, and lizard D. Moss soil, mushroom, and lizard
B. Soil, water, mushroom, and bee E. Lizard, mushroom, water and soil
C .Bee, moss, mushroom and and frog
- (Viii) . The leave in dicotyl plants have
A. Parallel venation D. Net like venation
B. Fibrous roots E. Both A and B are correct
C. One cotyledon
- .(ix) A boy climbed a coconut tree to harvest coconuts. Unfortunately, he fell down his upper arm, which bone was broken?
A. Ulna. B. Humerus C. Radius D. Femur E. Tibia
- (X) The growth of roots away from light is
A. Positive phototropism
B. Negative phototropism
C. Positive photonasty
D. Negative photonastry
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SECTION B

2. Match the functions of the parts of microscope in **List A** with their corresponding parts of microscope in **List B** by writing the letter of the correct response beside the item number in the answer booklet provided.

LIST A	LIST B
(i) Allows light to pass from the objective lens to the eye piece lens.	A. Body tube
(ii) Supports the eye piece and revolving nose piece.	B. Coarse adjustment knob
(iii) Raises or lowers the body tube in order to bring the image into sharp focus.	C. Diaphragm
(iv) Raises or lowers the body tube in order to bring the image into focus.	D. Fine adjustment knob
(v) (v) Raises and lowers the stage to keep the specimen in right position for observation.	E. Hinge screw
	F. Mirror
	G. Ocular tube
	H. Stage clip

SECTION B (60 Marks)

Answer all questions in this section

3. (a) How can fire accidents be avoided in the school laboratory? Give three points.

(b) Suggest three causes of cut accidents at home.

4. (a) Give the meaning of the following terms as used in Biology:

(i) Blood transfusion. (ii) Blood compatibility.

(b) (i) State two advantages of blood transfusion.

(ii) Outline four precautions to be taken during blood transfusion.

5. (a) Explain the distinctive features of the Division Filicinophyta.

(b) Draw a well labeled diagram of a fern plant.

6. (a) Outline three factors affecting transpiration.

(b) State three significance of transpiration.

7. (a) (i) Name three types of muscles found in mammals.

(ii) Which one of the muscle named in (a)(i) is a voluntary muscle?

(b) Briefly explain the functions of the following component of the skeleton:

(i) Skull (ii) Ribs (iii) Vertebral column (iv) Pelvic girdle

8. (a) (i) What are the raw materials for photosynthesis?

(ii) List two products of photosynthesis.

(b) State how the ileum is adapted for absorption function.

SECTION C (30 Marks)

Answer two (2) questions from this section.

9. (a) Explain how anaerobic respiration is applied in a real life situation.

(b) List the organs responsible for gaseous exchange in the following organisms:

(i) Goat (ii) Grasshopper (iii) Frog (iv) Tilapia.

10. Members of Matatu village are hunters, farmers and fishermen. They obtain a variety of foods

from their activities but do not have food processing industries. With one example in each case,

explain four methods which will help villagers to preserve their food

11. Human skeleton serves several functions in the body. With one example in each case, explain

four functions of human skeleton.