

**PRESIDENT'S OFFICE REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT-RALG  
RUFUI DISTRICT COUNCIL**

**DISTRICT FORM FOUR PRE MOCK EXAMINATIONS – 2024**

**033/1**

**BIOLOGY 1**

**TIME: 3:00 HRS**

**Monday 18<sup>th</sup> March, 2024 AM**

**INSTRUCTIONS**

1. *This paper consists of section A and B with a total of eleven (11) questions.*
  2. *Answer all questions from section A, B and only two (2) questions from section C*
  3. *All writing must be in blue or black ink*
  4. *All communication devices and any unauthorized materials are not allowed in the examination room.*
  5. *Write your name on every page of your answer sheets.*
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**SECTION A (16 marks)**

1. For each of the items (ix), choose the most correct answer from among the given alternatives and write its letter beside the item number in the answer booklet(s) provided
  - (i) Which among of the following is an example of an end product of anaerobic respiration in animals  
A. Alcohol    B. Lactic acid    C. Oxygen    D. Amino acid    E. Urea
  - (ii) Which of the following is the correct order of events?  
A. Fertilisation, implantation, ovulation. B. Ovulation, implantation, fertilization C. Ovulation, fertilisation, implantation. D. Fertilisation, ovulation, implantation E. None
  - (iii) The following are examples of reflex action except;  
A. Blinking of the eye B. Dilation of pupil C. Knee jerking D. Rubbing the eye E. Salivation
  - (iv) The joints which allow movement in many (all) directions are;  
A. Glind and hinge joints B. Glind and pivot joints C. Ball and socket joints D. Ball and glind joints E. Socket and hinge joints
  - (v) A feeding relationship in which both species benefits from the relationship is known as;  
A. Commensalism B. Parasitism C. Mutualism D. Saprophytism E. Symbiosis
  - (vi) The normal urine contains the following dissolved substance;  
A. Ammonia    B. Urea    C. Uric acid    D. Glucose    E. Amino acid

- (vii) The following is a set of raw materials for photosynthesis to occur except;  
 A. Water, light and oxygen      B. Carbon dioxide and water  
 C. Chlorophylls and Sunlight      D. Chlorophylls and Carbon dioxide  
 E. Carbon dioxide and oxygen.
- (vii) The third step in the scientific method is;  
 A. Experimentation B. Collecting data C. Identifying the problem  
 D. Formulating hypothesis      E. Conclusion
- (ix) The basic principles of waste disposal are;  
 A. reducing, burning and incinerating B. Reducing, re-using, and recycling  
 C. Recycling, burning and incinerating D. Burning, incinerating and tipping  
 E. Re-using, reducing and tipping
- (x) Which of the following is a pandemic disease;  
 A. Malaria      B. Covid-19      C. Plague      D. Cholera      E. Rift valley fever

2. Match the phrases in list **A** with response in list **B** by writing the letter of the correct response below corresponding item number in a table below.

LISTA	LISTB
(i) A type of seed germination where by cotyledons are pushed above the ground.	A. Micropyle
(ii) A pore which allows water enters into seed during germination.	B. Meiosis
(iii) Inability of seed to germinate.	C. Radical
(iv) Prevent a viable seed to germinate	D. Viability
(v) A type of cell division where by the same number of chromosomes is maintained from parent cell to daughter cell.	E. Epigeal germination
(vi) Increases the length and height of roots and shoots	F. Hard seed coat
	G. Mitosis
	H. Dormancy
	I. Cotyledon
	J. Hypogeal germination
	K. Lateral meristems
	L. Apical meristems

## SECTION B (54 Marks)

**This section consists of six (6) questions. Answer all questions from this section.**

3. Form four students at **Ikwiriri Secondary School** were asked to collect maize seedlings and sunflower seedlings during biology practical activities. You as form four student;
  - (a) State the classes of such plants.
  - (b) Identify four structural differences between the classes you stated in 3(a) above
4. Mr. Njoka and his family who spent most of their lives at Moshi Kilimanjaro with hot environmental temperature (27- 35 °C) and their bodies have adapted well in such conditions. Few years ago they moved to Nkasi district at Rukwa region with different environmental temperature (16-26 °C) compared to that of Moshi.
  - a) Identify the environmental temperature of Rukwa region as compared to that of Moshi.
  - b) Describe the mechanisms for the body to adapt the environmental temperature you identified in 4(a) above.
5. During December holiday 2022 form two students at **Kazamoyo Secondary School** visited **Saadani National park** as the celebration for completing their Form Two National Examination. At the journey they cross with animals such as Antelopes, giraffes, lions, and leopards climbing the big trees. Also they were able to see grasses and shrubs of different size and large group of mushrooms along the Wami River. From this Journey;
  - (a) (i) Construct a food web  
(ii) From food web in 5.(a), Indicate A. Producers B. Primary consumers  
C. Secondary consumers D. decomposer
  - (b) What will happen if mushroom will be removed from Manyara National Park?
6. In Rosa Alba plants red flower is controlled by an allele **R** whereas white flower is controlled by an allele **W**. In an experiment, red and white flowered Rosa Alba plants were crossed and all F<sub>1</sub> produced had pink flowers.
  - (a) Explain why such an observation.
  - (b) When 2 of F<sub>1</sub> were self- crossed, **1000 F<sub>2</sub>** were produced. By the help of illustration show how many of F<sub>2</sub> plants will have;
    - ( i) Red flowers
    - ( ii) Pink flowers
    - (iii) White flowers.
7. When **Mzee Muhogo Mchungu** was in worse situation because of bad accident occurred to him; gloves, Painkillers, Soap, Scissors, cotton wool and gentian Violet solution were used to help him as the victim. State the use of each equipment used to help Mzee Mchungu.

8. During interclass competitions at Mwaseni Secondary School, a player **Juma Kiroboto** before attempting to score the goal, he suddenly felt down and complained to have severe pain to his leg muscles.
- (a) Suggest the problem occurred to a player Juma Kiroboto.
  - (b) State the causes of the problem you suggested in 8(a) above. (Two reasons).
  - (c) Give at least two preventive measures for the problem you suggested in 8(a) above.

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

This section consists of three questions. Answer only two (2) questions from this section.

Question **10** is compulsory

9. COVID-19 is among of the world disasters which is likely to cause massive lose of people and other social and economic problems. You as Form four student praise your voice to educate the society about the COVID-19 based on the cause, two ways of transmissions and two preventive measures.
10. Form two students at Mohoro secondary school were asked to volunteer on blood transfusion programs. Low number of students responds to the program while the majority did not respond. What is your influence to the students who did not respond in blood transfusion program? (Four point)
11. Members of Utunge village are hunters, farmers and fishermen .They obtain variety of foods from their activities but do not have food from their activities but do not have food processing industries. With one example in each case, explain four methods which will help Utunge villager's to preserve food at their village which has no electricity