**THE UNITED REPUBLIC OF TANZANIA**

**PRIME MINISTER’S OFFICE**

**REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

**LINDI REGION MOCK** **EXAMINATION**

**FORM FOUR 2019**

**BIOLOGY 1**

**Time: 3 Hours**

**Instructions**

1. This paper consists of sections A, B and C with a total of **thirteen (13**) questions.
2. Answer **all** questions in sections A and B and **one (1)** question from section C.
3. Except for diagrams that must be drawn in pencil, all writing should be in blue or black ink.
4. Calculator’s cellular phones and any unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** on every page of your answer sheet(s)

**SECTION A (20Marks)**

Answer **all** questions in this section.

1. For each of the items (i) – (ii), choose the correct answer from among the given alternatives and write its letter beside the item number in the answer sheet.
2. Goiter is a deficiency disease caused by lack of which element in the diet?

A Carbohydrate B Iodine C Vitamin E

D Vitamin C E Protein

1. Tongue roller in a genetics is an example of

A gametogenesis B continuous variation C swallowing

D lubricating food E discontinuous variation

1. Which food substance can be tested by using iodine solution?

A Protein B Starch C Carbohydrate

D Non reducing sugar E Reducing sugar

1. The product of anaerobic respiration process in animals is

A lactic acid B carbon dioxide C alcohol

D water E oxygen

1. A phylum consisting of species with jointed appendages and exoskeleton is known as

A Chordata B Annelida C Arthropoda

D Platyhelminthes E Nematoda

1. The kidney in mammals is mainly responsible for

A excretion B digestion C transportation

D respiration E absorption

1. Which of the following hormones stimulates seed germination in plants?

A Gibberellins B Auxin C Cytokine

D Abscisic acid E Ethene

1. A joint which allows rotation in all planes is called

A suture B ball and socket C pivot

D ligament E hinge

1. Which of the following is NOT a component of First Aid Kit?

A Razor blade B Panaldol C Bandage

D Soap E Microscope

1. Which disease spread rapidly as a result of poor waste disposal?

A Anemia B AIDS C Cholera

D Leukemia E Small pox

1. Match the phrases in **List A** with the responses in **List B** by writing the letter of the correct responses from **List B** besides the item number of the answer sheet provided.

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| --- | --- |
| List A | List B |
| 1. External appearance of a given characteristic as a result of influence by a gene. 2. Genetic disorder characterized by failure of blood clotting. 3. A sudden genetic change which can be inherited 4. Characteristics that can pass on from parent to offspring through sexual reproduction. 5. The possession of the characteristics which are different from those of the parents and other offsprings. 6. A gene that influence characteristics over another gene when in heterozygous state. 7. A cross between individuals with homozygous parents. 8. A unit of inheritance which determines specific characteristics. 9. Genetic makeup of a given gene which determines a given characteristic. 10. A disorder resulting from lack of melanin pigments. | 1. Mutation 2. Sex linked character 3. Genotype 4. Dominant gene 5. Variation 6. Albinism 7. Phenotype 8. Test cross 9. Loci 10. Haemophilia 11. Homozygous 12. Backcross 13. Recessive 14. Gene 15. Co-dominance |

**SECTION B (60Marks)**

Answer all questions in this section

All questions carry **8marks** except question **five (5)** and **nine ( 9)** which carry **six 6marks** each

1. (a) Why schools should have a Biology laboratory? Give a reason

(b) State six laboratory rules

4. (a) State three basic principles of waste disposal

(b) Why poor waste disposal at home is said to cause adverse effects?

5. (a) Explain the function of vascular system in plants

(b) State three importance of transportation of materials in living things

6. (a) In the experiment conducted on single factor inheritance, individuals which were

male homozygous tall married a female who was homozygous dwarf. The gene

for tall was dominant over dwarf. Use the cross to find out the possibility of the

phenotypic results and the ratio in the first filial generation.

(b) Give the meaning of the following:

(i) Test cross

(ii) Back cross

(iii) Crossing over

7 (a) Define the following terms:

1. Meiosis
2. Mitosis
3. Allometric growth

(b) (i) Explain the significance of mitosis in growth

(ii) State three factors that affecting the rate of deterioration of human growth

8. (a) List any **four(4)** macro-elements in plant nutrition

(b) Explain the causes of any three common disorders and disease of human digestive

system

9. (a) List any two types of blood cells.

(b) Give **four (4)** differences between arteries and vein

10. (a) With examples, state the meaning of **Biotic** and **A biotic** factors of the environment

(b) (i) Differentiate the term “food chain” from a tropic level

(ii) Construct a food chain by using organisms named in the following list:

Grass, Bacteria, Lion and Zebra

(iii). Which one is the primary consumer in the that food chain

(iv). What is the role played by the lion in the food chain

**SECTION C (20Marks**)

Answer **one** (**1**) question from this section

11. With the aid of a well labeled diagram, describe the structure of bacteria and give three

Advantages and disadvantages of bacteria in daily life.

12. Explain any four any four effect of irresponsible sexual behavior and suggest five ways

of eradicating those behavior in the community.

13 Elaborate four causes and five preventive measures of drugs.