

**THE PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT
FORM FOUR SERIES No.04
BIOLOGY 1**

TIME 3:00HRS

INSTRUCTIONS

1. This paper consist of section A, B and C
2. Answer all questions from section A, B and only **two (2)** questions from section C
3. All answers must be written in the space provided
4. All writing must be in blue or black ink.
5. Write your number at the top right hand corner of every page.

SECTION A (16 Marks)

Answer **all** questions in this section

1. For each of the items (i)-(x) choose the correct answer form among the given alternatives and write its letter beside the item number in the answer booklet.

- i) Plants produce excretory products that are useful to other organism. Which of these products in NOT useful to human?
 - a) Cannabis
 - b) Carbon dioxide
 - c) Latex
 - d) Papain
 - e) Tannins
- ii) People living with HIV/AIDS (PLWHA) get deep sadness especially when they are stigmatized. What is an appropriate life skill for handling this problem?
 - a) Critical thinking
 - b) Decision making
 - c) Empathy
 - d) Problem solving
 - e) Self-awareness
- iii) When a finger is accidentally pricked by a needle, the hand is spontaneously drawn away from the needle. Which response is represented by this action?
 - a) Motor response
 - b) Reflex adjustment
 - c) Reflex Arc
 - d) Reflex actions
 - e) Reflex response
- iv) There is a saying that “A sound physical heath is the first and the fore most important requisite for the performance of one’s duty in one’s life” which of the following should be considered to maintain good health?
 - a) Regular exercise and development

- b) Regular exercise and good shape
 - c) Balanced diet and regular exercise
 - d) Balanced diet and hygienic food
 - e) Balanced diet and development
- v) One of the form three student, asked his biology teacher during teaching and learning locomotion in human about the importance of bones to the body of human. You as a biologist, discover one among the following which is not crucial of bones in human body
- a) Support
 - b) Protection
 - c) Transport
 - d) Shape
 - e) Locomotion
- vi) Rahma discover a street guy, who could not speak properly due to excess use of drugs that slow down the brain and makes a person feel like sleepy. What probably the type of drugs, a street guy over use?
- a) Stimulant
 - b) Sedatives
 - c) Hallucinogen
 - d) Depressant
 - e) Penicillin
- vii) Msaki got an accident of being hited by blunt object, after accident he was unable to withdraw his hand touches hot objects. Which of the nervous system could probably affected
- a) Cerebrum
 - b) Medulla Oblangata
 - c) Cerebellum
 - d) Spinal cord
 - e) Hypothalamus
- viii) The organism that reproduce sexually show variation among member of the same species of which of the following process.
- a) Plasmolysis

- b) Hydrolysis
 - c) Meiosis
 - d) Mitosis
 - e) Copulation
- ix) A form four student live with a neighbors whereby one of their siblings are twins but do not resemble one another, in gender and physical appearance. To her knowledge , she could call them, biological as
- a) Identical twins
 - b) Fraternal twins
 - c) Kurwa and Dotto
 - d) Conjoined twins
 - e) Multiple twins
- x) Which of the following is the proper method for disposing plastic bottle?
- a) Incineration
 - b) Burying
 - c) Burning
 - d) Recycling
 - e) Landfill

2. Match the description in List A with corresponding terminologies in List B by writing the letter of the correct response besides the items number in the answer booklet provided.

LIST A		LIST B
i)	The possession of characteristics which are different from those of the parents and other offspring	A. Mutation
ii)	A cross between individuals with homozygous parents	B. Sex linked
iii)	A units of inheritance which determine a specific characteristics	C. Genotype
iv)	A disorder resulting from lack of melanin pigments	D. Co-dominance
		E. Albinism
		F. Phenotype
		G. Test cross
		H. Gene

v)	Genetic makeup of a given gene which determine a given characteristics	
vi)	A sudden genetic which can be inherited.	

SECTION B (54Marks)

Answer **all** questions from this section

3. (a) In animals, not every mating leads to fertilization. Give three factors in males which account for this problem.
(b) Why is transpiration important to plants? Give three points.
4. A form two biology teacher was teaching a topic of classification in kingdom plantae and asked students to collect samples of the vascular tissue, leaves like structure without vascular tissue with gametophyte generation being dominant.
 - i) Give the common name of the plant collected
 - ii) Name the habitat where student found this plant naturally.
 - iii) How does the named plant 4 (i) grow?
5. State two (2) adaptations of each of the followings cells which enable them to do their roles efficiently in the body of living organisms.
 - i) White blood cell
 - ii) Red blood cell
 - iii) Spermatozoon
6. (a)
 - i) Briefly explain why meiotic division cannot take place in the somatic cells?
 - ii) Show the roles of meiosis in gametogenesis (3 points)
 b) Justify structures that offer biological support to the testis (state three points)
7. (a) Nasra weight 74kg with 165 cm height
 - i) Calculate her (body mass index)
 - ii) What is a possible nutritional disorder was likely to get due to her BMI?

b) Suggest four advises to Nasra as a biologist to improve her health.

8. Cross pollination enables mixing of genetic qualities between different plants, hence hybrid vigor is obtained. Explain four adaptation of plants have developed to exploit this advantage.

SECTION C (30 Marks)

Answer **any two** questions from this section

9. Consider that you are a medical doctor and you have received a patient whose investigation has diagnosed kidney stones suggest to the patient three possible causes and three measures for the kidney stones.

10. Anthropods are the most successful group of animals on the earth as the number of species of this group is greater than the number of all other kind of animals from biological perspective explains. Why successful (give four points)

11. “Most women prefer bottle feeding currently “advise them on the advantages of breast feeding by using six (6) points.