

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

DARES SALAAM REGION
FORM FOUR MOCK EXAMINATION - 2024

BIOLOGY 1

CODE: 033/1
TIME: 3:00 HOURS
Tuesday 9th July, 2024 A.M

INSTRUCTIONS

1. This paper consists of section **A, B** and **C** with total of **eleven (11)** questions
2. Answer **all** questions in section **A, B** and two (2) questions from section **C**
3. Section **A** carries **sixteen (16)** marks, section **B** carries **fifty four (54)** marks and section **C** carries **thirty (30)** marks
4. All writings must be in **blue** or **black** ink except drawings which must be drawn in pencil
5. Write your Examination Number on every page of your answer booklet (s)

This paper consists of 4 printed pages

SECTION A (16 Marks)
Answer **all** questions in this section

1. For each of the Item (I - x) choose the correct answer from among the given alternatives and write its letter beside the item number in the answer booklet provided
- i) In order to avoid dislocation of bones during locomotion, two bones held together by strong tissue which known as
- A. Muscles
 - B. Ligament
 - C. Ulna
 - D. Tendon
 - E. Cartilage
- ii) Mayele has a farm around the Indian ocean, he planted maize seeds and germinated. After five days all maize were died. Which conditions cause the maize to die?
- A. Crenation
 - B. Turgidity
 - C. Haemolysis
 - D. Plasmolysis
 - E. Diffussion
- iii) Which of the following is not true about Mosse plant
- A. They have no true roots, stems or leaves
 - B. They are true land plants
 - C. They do not have conducting tissues
 - D. They found growing in dump shady
 - E. They have true roots, stems or leaves
- iv) 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
- v) Form four students were presented with two cells. Cell A (plant cell) and cell B (Animal cell) which feature can be used to differentiate cell A from B?
- A. Presence of mitochondria
 - B. Presence of vacuole
 - C. Presence of cell wall
 - D. Presence of cell membrane
 - E. Presence of Cytoplasm
- vi) Why it is advised to build an Incinerator in every hospital or health centres?
- A. For collecting waste
 - B. For burning harzadous waste
 - C. For disposing liquid waste
 - D. For disposing plastic waste
 - E. For keeping small animals
- vii) The following substances are the excretory products in animals. Choose the least toxic form among them?
- A. Urea
 - B. Uric acid
 - C. Ammonia
 - D. Carbondioxide
 - E. Carbon dlooxide and water

- viii) Which of the following part of germinating seed is an embryonic shoot?
- Hypocotyl
 - Radicle
 - Plumule
 - Epicotyle
 - Cotyledone
- ix) Mrs Juma's child has protruding stomach and swollen limbs, what type of food should she give to her child to overcome the problem?
- Lipids
 - Starch
 - Protein
 - Vitamins
 - Minerals
- x) Fossils provide evidence for evolution because
- We can find out where organisms lived
 - We can tell what animals may have eaten
 - We can see how organisms have developed overtime
 - We can see extinct organism and compare them to living species
 - We can show how organisms behaved in the past

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

| LIST 'A' | LIST 'B' |
|---|-----------------------|
| i) Condition of pregnancy characterized by high blood pressure and protein in the urine | A: Ectopic pregnancy |
| ii) Termination of pregnancy before fully developed | B: Still birth |
| iii) A baby born bottom first instead of head first | C: Preeclampsia |
| iv) Condition when fertilized ovum fail to move to the uterus | D: Miscarriage |
| v) Giving birth after six months and a baby put in an incubator | E: Pre - mature birth |
| vi) Giving birth to a dead baby due to poisons, chemicals or shock | F: Breech birth |
| | G: Abortion |
| | H: Caesarean birth |
| | I: Baby damage |

SECTION B (54 Marks)

Answer **all** questions from this section

- 3 (a) Every secretion in the body has its own purpose, nose secret mucus, a mouth secret saliva and eyes secret tears. What do you think be a reason for
- Nose to secret mucus
 - Eyes to secret tears
 - Mouth to secret saliva
- (b) How do the following factors affect the rate of photosynthesis?
- Chlorophyll
 - Sunlight
 - Carbondioxide

- 4
 - (a) Give three (3) factors that aid ultrafiltration in glomerulus
 - (b) Give explanation to the following
 - i) Plasma protein are absent in glomerular filtrate
 - ii) Urine of normal person does not have glucose
 - iii) During cold days one produce large quantity of dilute urine
- 5
 - (a) Explain briefly in three (3) points how can seed dormancy be overcome
 - (b) Explain the role of three (3) necessary condition for a viable seed to germinate
- 6
 - (a) Explain each of the following biological phenomena
 - (i) A fish can live in water where there is low amount of oxygen gas but it tend to die when placed on land where there is high amount of oxygen gas
 - (ii) Your breathing rate does not go back normal as soon as you stop exercising
 - (iii) A plant with yellowish leaves produce poor yield than a plant with green leaves
 - (b) Transpiration is said to be necessary evil, explain by giving three (3) points in each case
- 7
 - (a) In biology binomial nomenclature used to assign organisms the scientific names. Outline four (4) rules used to recognize organisms internationally
 - (b) Outline five (5) characteristics of viruses
- 8
 - (a) Human skeleton serves several functions in the body and among of the function of skeleton is to provide surface area for attachment of muscles
Explain three (3) types of muscles attached to the human skeleton
 - (b) Briefly explain what happens to the muscles during bending and straightening of the arm

SECTION C (30 Marks)

Answer only **two (02)** questions from this section

9. Form four students in Mugabe secondary school were not interested to know the application of genetics in living organisms. Assume that you are a biology teacher in this school educate these students the six (06) application of genetics in daily life.
10. In man not every mating leads to fertilization give six (06) factors which account for this problem
11. Explain six (06) factors that affect the body immunity in human being