

PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

FORM THREE MID-TERM EXAMINATION

CODE 033

BIOLOGY 1

TIME: 2:30 Hours

Instructions

1. This paper consists of section A, B and C with a total of **eleven (11)** questions.
2. Answer **ALL** questions in section **A** and **B** and only two **(2)** questions from section **C** of which question number **9** is compulsory.
3. All writings must be in **blue** or **black** ink except for diagrams which must be done in pencil.
4. Section A **carries sixteen (16)** marks, section B **carries fifty four (54)** marks and section C **carries thirty (30)** marks.
5. Cellular phones and any unauthorized materials are not allowed in the examination room.
6. Write your Examination Number on every page of your answer booklet(s).
7. Failure to observe instructions given may lead to loss of some marks.

SECTION A (16 Marks)

Answer **ALL** questions in this section

1. For each of the items (i)-(x), choose the most correct answer from among the given alternatives and write its letter beside the item number in your answer sheet.
 - (i) A communicable disease which affects a large number of people in a short period of time at a given locality is referred as ;-
 - A. Epidemic
 - B. Pandemic
 - C. Sporadic
 - D. Endemic
 - (ii) On his way to school, Lilian saw a doctor disposing some waste from a nearby dispensary. What is the biological name of those waste materials?
 - A. Biodegradable wastes
 - B. Sludge wastes
 - C. Biohazardous wastes
 - D. Non-biodegradable wastes
 - (iii) A characteristic feature that distinguish monocot leaf from dicot leaf :-
 - A. Monocotyledonae have narrow leaves with network venation
 - B. Dicotyledonae broad leaves with parallel venation
 - C. Both have broad leaves and network venation
 - D. Monocotyledonae have narrow leaves and parallel venation
 - E. Dicotyledonae narrow leaves and network venation
 - (iv) The proper methods of disposing biohazardous wastes is
 - A. Burying
 - B. Incineration
 - C. Recycling
 - D. Feeding animals
 - (v) Madam **Jesca** is always suffering from sudden, involuntary and painful contraction of single muscles in her left thigh when she attempts strenuous exercise. What is the biological term used to describe this phenomenon?
 - A. Muscle antagonism
 - B. Muscle streture
 - C. Muscle cramps
 - D. Muscle fatigue
 - (vi) One of the following represent a locomotory structure used by Euglena
 - A. Cilia
 - B. Flagellum
 - C. Pseudopodium
 - D. Wings

- (vii) How does unicellular organism like amoeba avoid problem of bursting in aquatic environment?
- They have well developed nervous system
 - They possess a contractile vacuole
 - They have large nucleus
 - They have well developed cytoplasm
- (viii) In an experiment, a food sample changed to blue black when iodine solution was added to it. This implies that :-
- The sample solution contains proteins
 - The sample contains of starch
 - The sample contains reducing sugar
 - The sample contains lipids
- (ix) The main difference between artificial and natural systems of classification is that :-
- Only observable features are considered in natural classification
 - Internal and external features are considered in artificial classification
 - Internal and external features are considered in natural classification
 - Artificial classification is used by expert only
- (x) A flexible and elastic connective tissue that hold two bones in position is known as :-
- Tendon
 - Ligament
 - Muscles
 - Blood
2. Match each of the terminologies **in List A** with the corresponding explanation in **List B** by writing the letter of the correct response besides the item number in your answer sheet provided

| LIST A | LIST B |
|------------------------|---|
| (i) Ptyalin | A. It kills germs and activates the functioning of some enzymes |
| (ii) Lipase | B. Coagulates milk after being sucked in the stomach |
| (iii) Trypsin | C. Breaks down proteins into peptides |
| (iv) Hydrochloric acid | D. Breaks down lipids to fatty acids and glycerols |
| (v) Rennin | E. Hydrolyses peptides to amino acids |
| (vi) Mucus | F. Hydrolyses starch to maltose |
| | G. Lubricates and reduces friction to the stomach lining |
| | H. Breaks down maltose to glucose and fructose |
| | I. Emulsifies fat and oils for easy action of other enzymes |

SECTION B (54 Marks)

Answer **ALL** questions in this section

3. (a) By giving out five reasons, educate a foreigner who believe that studying biology is meaningless.
(b) Explain briefly how the biological knowledge you have obtained from school can be useful in agriculture and medicine
4. In performing surgery on a certain mammal, MREMI cut two blood vessels accidentary. In one of the vessel blood flow out with high pressure while in the other the blood flow out with low pressure.
(a) What are the names of the blood vessels with respect to the above explanation?
(b) Why one blood vessel had high pressure and the other low pressure. Explain briefly
(c) Why the blood vessels returning blood to the heart had valves at some intervals? Give one reason to support this statement
5. (a) What do you understand by the following terms as applied in biology
i) Exoskeleton
ii) Moulting
(b) State three advantages and two disadvantage of exoskeleton in arthropods.
(c) Name and explain the type of joints found at the following parts of the mammalian skeleton
i) Limb girdles
ii) Between vertebrae of the backbone
iii) How are ribs adapted to their function? Give only two points
6. Division angiospermophyta is categorized into two classes. Name and give at least four difference between members of the two classes.
7. (a) Give the meaning of the following terms
i) Respiration
ii) Gaseous exchange
(b) State any three factors affecting the rate of respiration in animals
(c) How would you apply the knowledge of anaerobic respiration in a real life situation? Give out three points
8. (a) In what ways does plant cell differ from an animal cell? Mention three points
(b) Sketch a diagram of an animal cell and from it label the structure responsible for :-
i) Energy synthesis
ii) Passage of materials in and out of the cell
iii) Control all life processes

SECTION C (30 Marks)

Answer **only two (2)** questions from this section of which question number **9** is compulsory.

9. The immunity of an individual organism is influenced by internal and external factors. In an essay form, explain any six factors affecting the immunity of an organism.
10. Scientists should find means of getting rid of all bacteria. Discuss
11. The mammalian skeleton performs several functions. Explain any six functions performed by the human skeleton