THE PRIME MINISTER'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

KALAMBO DISTRICT COUNCIL

MID TERM EXAMINATION

033/1 **BIOLOGY 1**

TIME: 3:00 Hours **YEAR: 2026**

1. This paper consists of three sections A, B and C with a total of eleven (11) questions.
2. Answer all questions in sections A and B and two questions in 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 writing should be in blue or black ink, except for diagrams that must be drawn in pencil.
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 sheets.

SECTION A (16 Marks)

Answer all questions in this section.

1. For each of the following items (i) – (x), choose the correct answer from the given alternatives and write its letter beside the item number in the answer sheet provided.

i) In all living organisms there is a force behind that enables conduction of water and food/mineral salts and excretory materials. This enables an organism to survive well. The force responsible for upward conduction of water against gravity by the plant comes from;

A. Transportation
B. Photosynthesis
C. Respiration
D. Transpiration

E. Translocation ii) A child from Utilili village was suffering from a certain deficiency then his family decided to take him to the nearby hospital and he was diagnosed and found to be suffering from Kwashiorkor, which type of food stuff from the following do you think that a health care would recommend to be provided to a child?

A. Milk, ground nuts, beans and meats

B. Milk, cassava, sorghum and wheat

C. Cabbage, spinach, cassava and eggs

D. Sorghum, cassava, rice and yams

E. Beans, spinach, eggs and rice iii) Form three students attended the school biology laboratory for grinding hibiscus in order to obtain its juice for practical activity. Which set of apparatus are they going to use when grinding the leaves.

A. Test tube and test tube rack

B. Microscope and hand lens

C. Beaker and Bunsen burner

D. Spatula and tongs

E. Mortar and pestle iv) During the biology class session, a biology teacher explained to his students about how life existed and that it has no origin. Thus it did not have a moment of creation and therefore life has no origin. Which of the following is the correct name of this theory?

A. Cosmozoan theory

B. Spontaneous generation theory

C. Organic evolution theory

D. The steady state theory

E. Special creation theory

v) A patient has diagnosed with low of blood sugar. Which hormone you would recommend to regulate the victim's sugar?

A. Insulin hormone C. Antidiuretic hormone

B. Glucagon hormone D. Aldosterone hormone

E. Testosterone vi) Which among the following parts of the seed allow water to enter into a seed during germination

A. Embryo D. Cotyledons

B. Plumule E. Seed coat

C. Micropyle vii) Implantation of the human embryo usually occurs in which of the following parts of human body?

A

viii) . cervix D. Vagina

B. Uterus E. Oviduct

C. Ovary

viii) Respiratory surface of aquatic organisms such as fish takes place in the;

A. Fins D. Operculum

B. Gills E. Spiracles

C. Lungs ix) Mwajuma has a farm around the Indian Ocean. She planted maize and germinated. After five days all maize were dried. Which conditions cause the maize to die when planted near Indian Ocean?

A. Crenation D. Plasmolysis

B. Turgidity E. Diffusio

C. Haemolysis

x) Practically, higher animals have tongue for a purpose in life. This tongue can either be rolled or unrolled especially when an animal is performing various activities. In animal, tongue rolling is an example of:

A. Continuous variation D. Swallowing

B. Mechanical digestion E. Lubricating food

C. Discontinuous variation

2. Match the item in List A with responses in List B by writing the letter of the correct response from List B beside the item number of List B in your answer sheet.

LIST A	LIST B

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

SECTION B (54 Marks)

Answer all questions from this section.

3a) Evolution and its theories play a great role in biology studies, support the statement by giving any three points.

b) State any two theories concerning with the origin of life

c) Mention any five weaknesses or demerits of Lamarck's theory of organic evolution.

4. a) similar types of animal cells were placed in three different solutions namely E, F and G. After some time, the cell in solution G burst, the cell in solution F shrank and shriveled and cell in solution E did not change.

i) Which type of solution were E, G and F? ii) Explain the reason for such observations

b) Why breast feeding is preferred to bottle feeding? Give three reasons.

5. Form four students from a certain secondary School went for a study tour at a bakery centre where they observed spoiled breads in a cupboard surrounded with white particles seen like clubs in structure at the top. The tour guide asked one of the students to share some concepts with her class mates based on the guidelines below.

a) Name of the organisms found immersed on the bread

b) Kingdom and phylum of the organisms in (a) above

c) Explain any five importance of the kingdom in which the organism above belong

6. Form two students were asked by their laboratory technician to carry out experiment on a food sample containing reducing sugar. During testing, laboratory technician provided the following; Benedict solution, Test tube holder, Bunsen burner, Measuring cylinder, dropper, test tube rack and dropper. What was the use of;

a) Benedict solution

b) Test tube

c) Bunsen burner

d) Measuring cylinder

e) Dropper

f) Test tube rack

7. a) Differentiate aerobic respiration from anaerobic respiration by giving four points

b) In an experiment, varieties of bean seeds having red seed coats were crossed with white coated beans. All the bean seeds obtained in F1 generation had red seed coats. Then, the F1 generation were selfed and F2 generation contained of 7324 seeds.

i) Using appropriate genetic symbols work out the genotype of F1 generation and the genotype of F2 generation.

ii) From the information above, work out the following relying on F2 generation

a) Genotypic ratio
b) Phenotypic ratio
c) Total number of red seeds
d) Find the percentage of white and red seeds

8. a) Plants do not need an elaborate system similar to that of animals. Explain by giving four points.

b) By using diagrams distinguish plant cell and animal cells by giving three points.

SECTION C (30 Marks)

Answer only two questions in this section.

9. In our county, rape is one of the biggest social problems in the society. Assuming you are a social welfare staff, address the public about this social problem under the following guidelines. i) Meaning of rape ii) Possible causes of rape in Tanzania. Give four points iii) Effects of rape in Tanzania. Give four points iv) Ways of preventing or minimizing rape in Tanzania. Give four points.

10. Because of their economic importance in Tanzania, insects are extensively studied by entomologists as important members of phylum Arthropoda. Explain at least four (4) merits and three (03) demerits of this particular class of arthropods which are found in your place.

Write a descriptive report which you can use to educate the community about the mode of transmission, symptoms and preve