

Student's Assessment Number

THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
FORM TWO NATIONAL ASSESSMENT

033

BIOLOGY

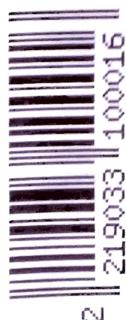
Time 2:30 Hours

Year: 2022

Instructions

1. This paper consists of sections A, B and C with a total of **ten (10)** questions.
2. Answer **all** questions.
3. Section A and C carry **fifteen (15)** marks each and Section B carries **seventy (70)** marks.
4. All writing must be in blue or black ink **except** drawing which must be in pencil.
5. Cellular phones and any unauthorized materials are **not** allowed in the assessment room.
6. Write your **Assessment Number** at the top right corner of every page.

FOR ASSESSOR'S USE ONLY		
QUESTION NUMBER	SCORE	ASSESSOR'S INITIALS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
TOTAL		
CHECKER'S INITIALS		



SECTION A (15 Marks)

Answer **all** questions.

1. For each of the items (i) - (x), choose the correct answer from the given alternatives and write its letter in the box provided.

- (i) Farmers in a certain village found their maize crops have yellow leaves with dead spots at the margin and tips. Which mineral do the maize crops lack?
A Calcium B Sulphur
C Phosphorus D Potassium
- (ii) The Saranga Football Team's goalkeeper fell down during the match due to muscle cramps. Which component in the First Aid kit will you use to give him first aid?
A Vaseline B Spirit
C Liniment D Scissor
- (iii) What is the main product of anaerobic respiration in animals?
A Lactic acid B Alcohol
C Water D Carbon dioxide
- (iv) Which organisms feed on primary consumers?
A Lion, Hyena and Leopard B Leopard, Buffalo and Giraffe
C Hyena, Zebra and Wildebeest D Zebra, Wildebeest and Buffalo
- (v) If there is cholera outbreak in the nearby school, which way would you use to prevent the disease?
A Killing mosquitoes B Covering nose when sneezing
C Boiling drinking water D Eliminating rat and fleas
- (vi) Why is screening of donors' and recipients' blood samples before transfusion important?
A Ensuring compatibility B Preventing bleeding
C Ensuring incompatibility D Enhancing coagulation
- (vii) Which apparatuses are used for heating substances in the Biology laboratory?
A Test tube holder and Thermometer B Spirit lamp and Bunsen burner
C Bunsen burner and Thermometer D Spirit lamp and Test tube rack
- (viii) Why is it necessary to chew food properly before swallowing?
A Dissolves chemicals taken into the mouth
B Kills harmful organisms present in the food
C Helps digestive enzymes to penetrate the food
D Breaks down small pieces of food into large
- (ix) Which statement is true about the virus?
A It is active outside the host cell but dormant inside it
B It is active inside the host cell but dormant outside it
C It carries life processes when outside the host cell
D It has both DNA and RNA as genetic materials
- (x) How is plague transmitted from one person to another?
A Through sexual intercourse with an infected person
B By contact with water containing parasitic larvae
C Through tsetse fly bites from infected to a healthy person
D Through rat fleas bites from infected to a healthy person

2. Match the descriptions of warning signs in **List A** with the corresponding warning sign label in **List B** by writing the letter of the correct response below the item number in a table provided.

List A		List B	
(i)	Substances which are dangerous and may cause death.	A	Corrosive
(ii)	Substances which can catch fire easily.	B	Explosive
(iii)	Substances which emit harmful radiation.	C	Toxic
(iv)	Substances which can damage the skin and other tissues.	D	Irritant
(v)	Substances containing microbes which can cause disease.	E	Fragile
		F	Flammable
		G	Biohazard
		H	Radioactive

Answer

List A	(i)	(ii)	(iii)	(iv)	(v)
List B					

SECTION B (70 Marks)

Answer **all** questions in this section.

3. (a) Identify the organs which are used for gaseous exchange in the following organisms:
- (i) Cow
.....
- (ii) Frog
.....
- (iii) Maize leaf
.....
- (iv) Fish
.....
- (b) Plants cannot survive without carrying out the process of gaseous exchange. In three points, justify this statement.
- (i)

(ii)

(iii)

4. Draw the following apparatuses which are found in the Biology laboratory and state the use of each.

(a) Spatula

(b)	Tripod stand
-----	--------------

(c) Test tube holder

(d) Filter funnel

5. Two people visited the hospital complaining of general body weakness. The doctor diagnosed them with sickle cell anaemia.

- (a) Outline six symptoms of such disorder.

(i)

(ii)

- (iii)
- (iv)
- (v)
- (vi)

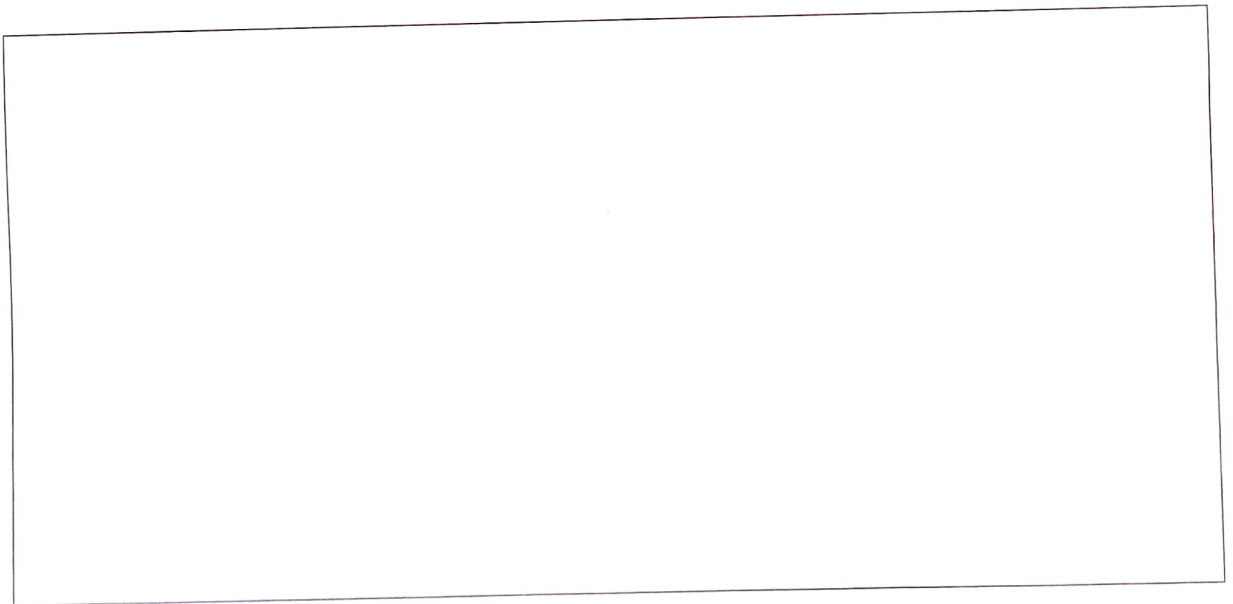
(b) State two ways you would recommend to the patients so as to control the disorder.

- (i)
- (ii)

6. (a) Outline three similarities between plant and animal cells as seen under the light microscope.

- (i)
- (ii)
- (iii)

(b) Draw a diagram of a plant cell as seen under the light microscope and label six parts.



7. Form Two students classified mosses and ferns into the same Division simply because they have chlorophyll for photosynthesis.

(a) Which classification system did they use?

.....
.....

(b) Briefly explain four demerits of the classification system used in 7 (a).

- (i)
- (ii)
- (iii)
- (iv)

8. Form Two students entered the biology laboratory and were provided with water, a tea bag, match box, beaker and a Bunsen burner.

(a) Using the materials and apparatuses given, outline four procedures they would follow to demonstrate the process of diffusion.

- (i)
- (ii)
- (iii)
- (iv)

(b) In two points, briefly explain the importance of the named process in 8 (a) to living organisms.

- (i)

(ii)

9. The school Baraza, selected you to become the chairperson for cholera prevention campaign in the neighbouring community. Briefly explain five ways you will use to educate the community about the prevention of the disease.

(i)

(ii)

(iii)

(iv)

(v)

10. Self-employed women have come to Dar es Salaam for training in food preservation methods. Elaborate to them the six methods of food preservation.