

Student's Assessment Number

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

033

BIOLOGY

Year: 2023

Time 2:30 Hours

Instructions

1. This paper consists of sections A, B and C with a total of **ten (10)** questions.
2. Answer **all** questions in the spaces provided.
3. Section A carries **fifteen (15)** marks, section B **seventy (70)** marks and section C carries **fifteen (15)** marks.
4. All writing must be in **blue or black** ink **except** drawing which must be in pencil.
5. Cellular phones and any unauthorised 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 in this section.

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) Which branch of biology deals with the study of plants?
A Taxonomy B Botany
C Ecology D Zoology
- (ii) A teacher sprayed a perfume in one corner of the classroom and after 10 minutes the entire classroom was filled with the smell of the perfume. Which process was demonstrated by the teacher?
A Osmosis B Mass flow
C Transpiration D Diffusion
- (iii) Farmers in Naiva village complain of passing blood - stained urine and faeces. Which disease is likely affecting them?
A Gonorrhoea B Cholera
C Bilharzia D Malaria
- (iv) A mother went to hospital with her baby complaining of the baby's high body temperature. Which instrument will be used to examine the baby?
A Beam balance B Thermometer
C Stop watch D Stethoscope
- (v) What happens during the process of taking air into the lungs of human being?
A Air is pushed out of the lungs B The ribcage moves inwards
C The diaphragm contracts D The diaphragm relaxes
- (vi) Why is chlorophyll necessary for photosynthesis?
A Absorbs sunlight energy B Splits water molecules
C Manufactures carbohydrate D Transport water and minerals
- (vii) Which practice would you recommend to control the cancer disease?
A Having frequent blood transfusion
B Doing regular physical exercises
C Taking enough fibres everyday
D Using chemo and physical therapy

(viii) Which of the following characteristics applies to members of kingdom plantae?

- (i) They have cell wall made up of chitin
 - (ii) They feed on dead and decaying organic matter
 - (iii) They have cell wall made up of cellulose
 - (iv) They have membrane bound nucleus
- A (iii) and (iv) B (i) and (ii)
C (i) and (iv) D (ii) and (iv)

☐

(ix) Which foods will you recommend to a child suffering from kwashiorkor?

- A Milk, groundnuts, beans and meat
- B Milk, cassava, sorghum and wheat
- C Cabbage, spinach, cassava and eggs
- D Sorghum, cassava, rice and yams

☐

(x) How do primary producers initiate energy flow in an ecosystem?

- A Feeds on herbivores and release nutrients
- B Converts sunlight energy into chemical energy
- C Decompose organic matter and sets energy free
- D Converts chemical energy into sunlight energy

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2. Match the functions of the blood vessels in **List A** with the name of the blood vessels in **List B** by writing the letter of the correct response below the corresponding item number in a table provided.

List A		List B	
(i)	Transports oxygenated blood from the lungs to the heart.	A	Coronary artery
(ii)	Carries blood containing waste materials away from the heart.	B	Superior vena cava
(iii)	Transports deoxygenated blood from the heart to the lungs.	C	Hepatic artery
(iv)	Transports deoxygenated blood from the lower parts of the body to the heart.	D	Pulmonary artery
(v)	Transports deoxygenated blood from the upper parts of the body to the heart.	E	Inferior vena cava
		F	Renal vein
		G	Coronary vein
		H	Pulmonary vein

Answer

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

SECTION B (70 Marks)

Answer **all** questions in this section.

3. (a) Identify the communicable and non-communicable diseases from the following list:
Marasmus, Scurvy, Cholera, Tuberculosis, Pellagra, Leukaemia, Malaria and Syphilis.

(i) Communicable diseases

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(ii) Non communicable diseases

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- (b) How is each of the communicable disease sorted in (a) (i) transmitted?

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4. Form Two students were asked to observe sections of plant cells using a light microscope.
(a) Why was it necessary to use such an instrument?

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- (b) Draw a diagram of a light microscope and label the seven parts.



5. (a) How does a plant cell differ from an animal cell? Give four key points.

Plant cell	Animal cell
(i)	
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(ii)	
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(iii)	
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(iv)	
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- (b) What will happen if the cell membrane is severely damaged?

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6. Your community requested you to educate them about modern methods of preserving its milk, meat, tomatoes, mangoes and vegetables. Briefly explain to them four methods for preserving such products.

(i)

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(ii)

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(iii)

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(iv)

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(a)

Identify four components found in the First Aid kit and state the use of each one.

(i)

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(ii)

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(iii)

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(iv)

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- (b) Outline four procedures you will follow to give the First Aid to a person with the problem of nose bleeding.

- (i)
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- (ii)
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- (iii)
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- (iv)
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8. (a) State two Phyla of the Kingdom Fungi.

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- (b) "Fungi are important organisms to human being." By using four points, justify this statement.

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- (ii)
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- (iii)
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(iv)

9. Two people have been severely injured in a car accident, leading to excessive bleeding hence requiring blood transfusion.

(a) Suggest four precautions to be considered before carrying out this process.

(i)

(ii)

(iii)

(iv)

- (b) Why is blood transfusion important for these individuals? Give a reason.

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SECTION C (15 Marks)

Answer question ten (10).

10. Caring and supporting people living with HIV/AIDS is essential for them to live a healthy lives. In six points, justify this statement.

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