

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

033

BIOLOGY**Time: 2:30 Hours****Year: 2020****Instructions**

1. This paper consists of sections A, B and C with a total of **eleven (11)** questions.
2. Answer **all** questions in sections A and B and **one (1)** question from section C.
3. Section A carries **thirty (30)** marks, section B **fifty (50)** marks and section C carries **twenty (20)** marks.
4. All writing must be in blue or black ink **except** drawing 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.

maktaba.tetea.org



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 (30 Marks)

Answer **all** questions in this section.

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

(i) Which condition occurs when a plant cell is immersed in highly concentrated solution?

- | | |
|---------------|--------------|
| A Turgidity | B Crenation |
| C Plasmolysis | D Haemolysis |

(ii) The process by which green plants and other organisms use sunlight energy to manufacture their own food is known as

- | | |
|------------------|-------------|
| A respiration | B digestion |
| C photosynthesis | D nutrition |

(iii) Which storage organ does sugarcane stores its food after photosynthesis?

- | | |
|------------|--------------|
| A Stem | B Root tuber |
| C Tap root | D Rhizome |

(iv) The following are the end products of anaerobic respiration in plants **except**

- | | |
|-------------------|----------------|
| A energy. | B lactic acid. |
| C carbon dioxide. | D alcohol. |

(v) Which organisms belongs to Kingdom Plantae?

- | | |
|-----------------------|------------------|
| A Fern and amoeba | B Moss and mucor |
| C Liverwort and yeast | D Fern and moss |

(vi) Bacteria and fungi are ecologically referred to as

- | | |
|--------------|----------------|
| A producers. | B decomposers. |
| C parasites. | D predators. |

(vii) Unexpected event which can cause injury and sometimes death is called

- | | |
|-------------|--------------|
| A accident. | B emergency. |
| C outbreak. | D disaster. |

(viii) The liquid induced into the body of an organism so as to increase antibody production is known as

- | | |
|-----------------|-----------|
| A tissue fluid. | B lymph. |
| C vaccine. | D plasma. |

(ix) People with talking behaviour while eating are considered to have

- | | |
|---------------------|------------------|
| A bad manner. | B table manner. |
| C talkative manner. | D chatty manner. |

(x) Arteries have thick muscular walls because they transport blood

- | | |
|----------------------|------------------------|
| A at low pressure. | B at high pressure. |
| C towards the heart. | D away from the heart. |

2. For each of the items (i) - (x), write **True** if a statement is correct or **False** if a statement is not correct in the spaces provided.

- (i) All cells contain chloroplasts.
- (ii) Cholera is transmitted through contaminated food.
- (iii) During inhalation, diaphragm relaxes and becomes dome-shaped.
- (iv) Vena cava transports deoxygenated blood from the body to the heart.
- (v) Sharing of towels can spread STI's
- (vi) Zoologist is a person who studies plants.
- (vii) Bile is a greenish yellow liquid produced by gall bladder.
- (viii) Producers are organisms that make their own food.
- (ix) All members of Kingdom Fungi are autotrophs.
- (x) Sitting upright when eating or drinking prevents choking.

3. Match the phrases in **List A** with responses in **List B** by writing the letter of the correct response below the corresponding item number in the table provided.

List A	List B
(i) Ability of the body to resist infection and disease	A Disease
(ii) The invasion of pathogens into the body of living organism.	B Vaccination
(iii) A process of inducing antigens into a healthy person.	C Infections
(iv) A condition that affects the health of the body and is characterized by certain symptom.	D Vectors
(v) Agents which spread pathogens in the community.	E Immunity
	F Endemic
	G Antibodies
	H Pandemic

Answers

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

4. Complete each of the following statements by writing the correct answer in the spaces provided.
- (i) The sticky fluid in the nose that helps to trap dust is known as _____
 - (ii) The muscles that are found between the ribs are called _____
 - (iii) The process of taking in air into the lungs is called _____
 - (iv) The breakdown of food in the absence of oxygen to release energy is known as _____
 - (v) The structure that closes the opening of the trachea to prevent food from entering it during swallowing is known as _____

SECTION B (50 Marks)

Answer **all** questions in this section.

5. (a) Differentiate eukaryotic from prokaryotic cells.

- (b) Choose any two parts found in an animal cell and briefly explain one function for each.

(i)

(ii)

- (c) Why most of the plant cells have cellulose cell wall? Briefly explain.

6. (a) State three laboratory rules.

(i)

(ii)

(iii)

- (b) **Figure 1** represents an instrument used to magnify too small objects or organisms in a Biology laboratory. Study it carefully and then answer the questions that follow:

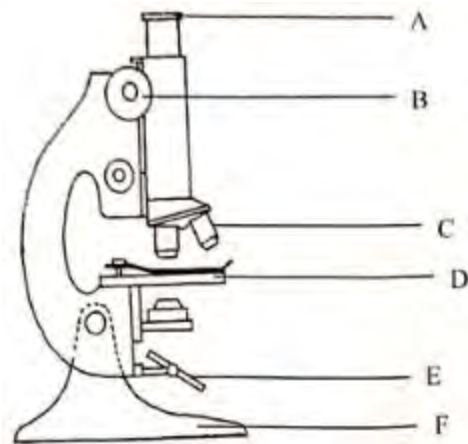


Figure 1

- (i) Name the parts labeled A - F

A _____
B _____
C _____
D _____
E _____
F _____

- (ii) State the function of the part labeled E.

7. (a) Why is food chain considered to be a simple transfer of energy? Briefly explain.

- (b) Construct four possible food chains by using the following organisms:
Grasses, Lion, Bacteria, Zebra, Hyena and Giraffe.

(i) _____
(ii) _____
(iii) _____
(iv) _____

- (c) Explain the role played by the following organisms in the food chains you have constructed in 7(b) above.

(i) Bacteria.

(ii) Grasses.

8. 2 cm³ of a food sample solution **Q** changed to purple colouration when 1 cm³ of sodium hydroxide followed by 2-3 drops of copper II sulphate solution were added to it.

- (a) Identify a food substance present in the solution **Q**.

- (b) State two functions of the food substance present in the solution **Q**.

(i)

(ii)

- (c) Give five natural sources of food substance contained in the solution **Q**.

(i)

(ii)

(iii)

(iv)

(v)

9. (a) State the use of the following components of First Aid kit.

(i) Cotton wool

(ii) New razor blade

(iii) Soap

(iv) Iodine tincture

- (b) Give four importance of providing First Aid to a person who has been bitten by a snake.

(i) _____

(iii) _____

(iv) _____

SECTION C (20 Marks)

Answer **one (1)** question from this section.

10. Describe two merits and two demerits of each of the artificial and the natural systems of classifications.

11. Explain the importance of transport of materials in animals. Give six points.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

