

**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.



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:

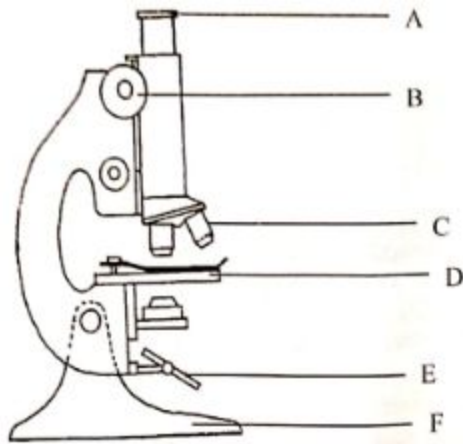


Figure 1

- (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
