

Candidate's Examination Number

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

033

BIOLOGY

Time 2:30 Hours

Wednesday, 13th November 2019 p.m.

Instructions

1. This paper consists of sections A, B and C with a total of **eleven (11)** questions.
2. Answer **all** questions in section A and B and **one (1)** question from section C.
3. All writing must be in blue or black ink **except** drawing which must be in pencil.
4. Calculators, cellular phones and any unauthorized materials are **not** allowed in the examination room.
5. Write your **Examination Number** at the top right corner of every page.

FOR EXAMINERS' USE ONLY		
QUESTION NUMBER	SCORE	EXAMINER'S INITIALS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
TOTAL		
CHECKER'S INITIALS		



SECTION A (30 Marks)

Answer **all** questions in this section.

I. 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) The branch of science which deals with the study of living things is known as

- A Biology
B Ecology
C Botany
D Zoology.

(ii) Which of the following structure controls the movement of materials in and out of the cell?

- A Nucleus
B Chloroplast
C Cell membrane
D Vacuole.

(iii) The following are solid wastes **except**

- A paper
B urine
C plastics
D cans

(iv) Which of the following is a symptom of Tuberculosis?

- A Curved legs
B Diarrhoea
C Prolonged cough
D Skin rashes

(v) The part of the alimentary canal which rolls the chewed food into bolus is called

- A Tongue
B Oesophagus
C Pharynx
D Epiglottis.

(vi) What will happen when a red blood cell is placed in a more concentrated solution?

- A Crenation
B Turgidity
C Haemolysis
D Plasmolysis.

(vii) A room specifically designed for carrying out scientific experiments is known as

- A classroom
B fume chamber
C library
D laboratory.

(viii) The lowest rank of classification is called

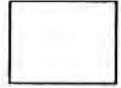
- A Class
B Kingdom
C Species
D Genus.

(ix) Which of the following blood group is a universal donor?

- A B
B A
C AB
D O.

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- (x) Which one of the following is recommended as a First Aid procedure for a victim who has been stung by a bee?
- A sitting quietly.
 - B giving huge amount of water to the victim.
 - C applying baking soda paste on the bee stung area.
 - D leaving the cotton on the stung area for few minutes.



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 space provided.

- (i) A good mannered person will always greet others.....
- (ii) Petrol, diesel and other chemicals can be kept in soda bottles and stored in cup boards at home only.....
- (iii) One of the symptoms of cholera is diarrhoea.....
- (iv) Natural classification is based on evolutionary relationships.....
- (v) Respiration takes place in animal only while photosynthesis takes place in plants.
.....
- (vi) In ecosystem, herbivores feed on primary consumers.....
- (vii) Xylem vessels transport water from the roots to the leaves.....
- (viii) Anaerobic respiration is one of the causes of muscle fatigue.....
- (ix) All living things can reproduce.....
- (x) Photosynthesis is important because it releases carbon dioxide in the atmosphere.
.....

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

List A		List B
(i)	The structure used for gaseous exchange in human being.	A Larynx
(ii)	The structure which prevent food from entering the trachea during swallowing.	B Yeast
(iii)	The structure which trap dust in the trachea.	C bronchioles
(iv)	The process which release energy in absence of oxygen.	D Cilia
(v)	Organism which break down sugars to carbon dioxide and alcohol.	E Alveoli
		F Epiglottis
		G Aerobic respiration
		H Anaerobic respiration

Answer

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

4. Complete each of the following statements by writing the correct answer in the space provided.

- (i) The linear flow of energy and nutrient in the ecosystem is known as.....
- (ii) The living component of an environment is known as.....
- (iii) Organisms which rely on other organisms for food in the ecosystem are called.....
- (iv) A group of interdependent organisms living in an environment is called.....
- (v) The environment and all its interacting components is called.....

SECTION B (50 Marks)

Answer **all** questions in this section.

5. (a) Mention four types of organs found in animal body.
- (i)
 - (ii)
 - (iii)
 - (iv)
- (b) Briefly explain two differences between a plant cell wall and a cell membrane.
- (i)
 - (ii)
- (c) Outline two similarities between animal and plant cells.
- (i)
 - (ii)
6. (a) List six characteristics common to all living things.
- (i)
 - (ii)
 - (iii)
 - (iv)
 - (v)
 - (vi)
- (b) Name the instruments used to measure the following parameters:
- (i) Temperature
 - (ii) Length
 - (iii) Time
 - (iv) Mass
7. (a) What do you understand by the term "water borne diseases" as used in Biology?
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- (b) Name any three water borne diseases.
- (i)
- (ii)
- (iii)
- (c) What would happen if a health person drinks unboiled water contaminated with the following?

(i) *Salmonella typhi*.

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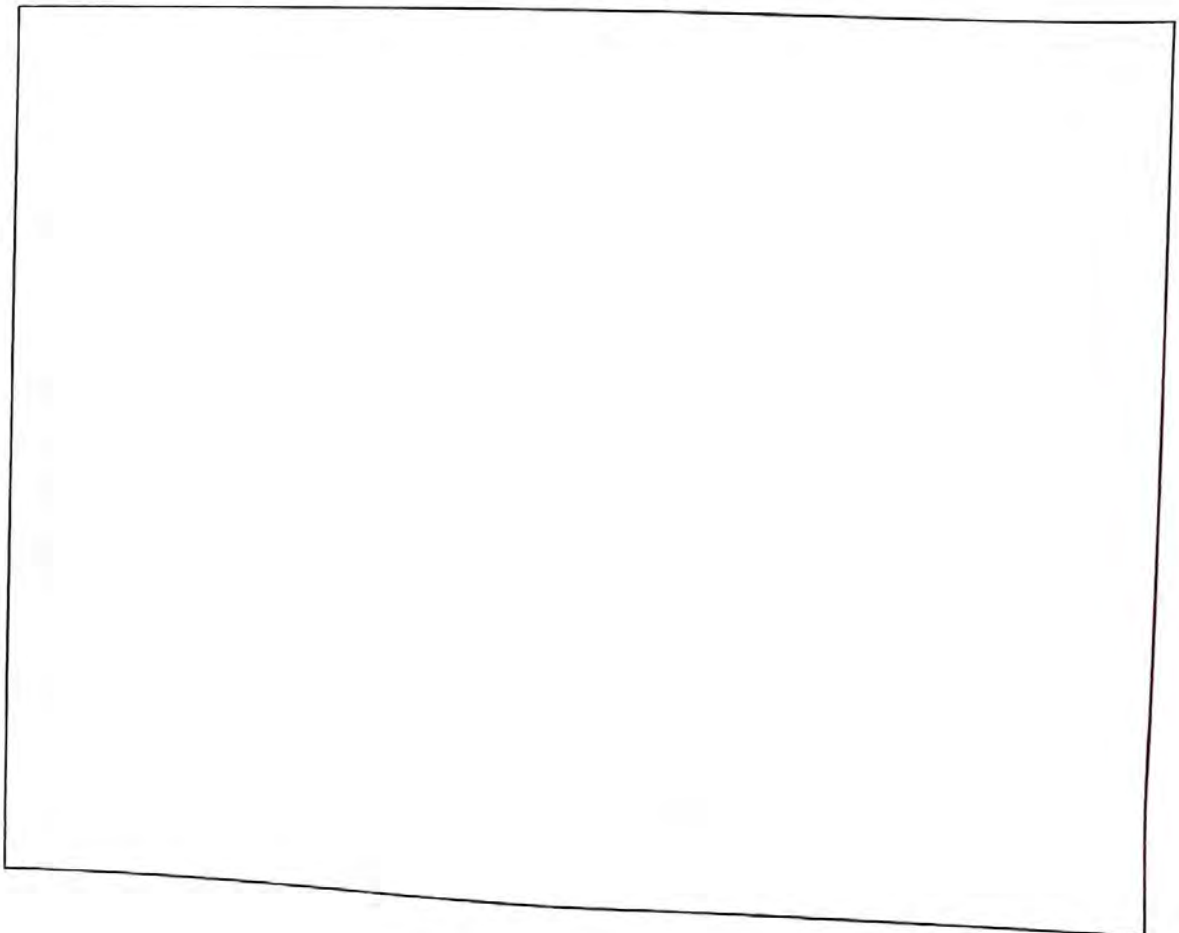
(ii) *Entamoeba histolytica*.

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8. (a) Draw a diagram of a fern plant and label four parts.



(b) Outline three advantages of a fern plant.

(i)

(ii)

(iii)

9. (a) List five accidents which are common at school and home.

(i)

(ii)

(iii)

(iv)

(v)

(b) Differentiate the term waste from waste disposal.

(c) Why it is not healthy advised to give alcohol to a snake bite victim? Briefly explain.

SECTION C (20 Marks)

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

10. Explain six factors which affect the rate of photosynthesis process in plants.

11. Explain six factors which affect the rate of transpiration in plants.