

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

033

BIOLOGY

Time 2:30 Hours

Year : 2021

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 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		
11		
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) Scurvy is a nutritional deficiency disease due to lack of
 A vitamin C in the diet. B mineral salt in the diet.
 C vitamin B₁₂ in the diet. D vitamin D in the diet.
 - (ii) Substances going in and out of the cell are controlled by
 A cytoplasm. B cell membrane.
 C vacuole. D tonoplast.
 - (iii) Which of the following step is **not** involved in scientific investigations?
 A Problem identification B Asking question
 C Formulating hypothesis D Solving questions
 - (iv) A parasite that causes malaria is known as
 A Schistosoma. B Plasmodium.
 C Mosquito. D Amoeba.
 - (v) The process whereby carbon dioxide passes from blood into alveoli of lungs is called
 A osmosis. B respiration.
 C diffusion. D breathing.
 - (vi) A component of the blood which is responsible for blood clotting is known as
 A albumin. B haemoglobin.
 C leucocytes. D fibrinogen.
 - (vii) Why rabbit is called a primary consumer?
 A It feeds on animals B It feeds on plants
 C It feeds on bacteria D It feeds on fungi
 - (viii) If you are asked to prepare a First Aid Kit with its components, which of the following will **not** be included?
 A Iodine tincture B Medicine to cure diseases
 C Pair of scissors D Sterilized cotton wool
 - (ix) The following organisms belongs to Kingdom Fungi
 A Mucor, Mushroom, Yeast
 B Moss, Mucor, Yeast
 C Euglena, Mushroom, Mucor
 D Liverworts, Mushroom, Mucor

- (x) Which of the following is a risky behaviour?
- A Accepting favours and gifts from parents
 - B Having many sexual partners
 - C Keeping good company and avoiding immoral friends
 - D Shaking hands with HIV/AIDS infected individuals

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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) Sterile gauze is used for bandaging to allow enough air to get to the wound.....
- (ii) Hydrochloric acid in the stomach is a natural defense against infections.....
- (iii) Beard grows and breasts enlargement are secondary sexual characteristics in girls.....
- (iv) Aorta carries deoxygenated blood from the heart to the lungs.....
- (v) A bacterium can be distinguished from amoeba by possession of cell wall.....
- (vi) Acids and alkalis are corrosive substances because they emit harmful radiations.....
- (vii) Organ is a group of tissues that perform the same function.....
- (viii) Digestion of protein starts in the mouth.....
- (ix) Alveoli are structures that increase surface area for gaseous exchange in the lungs of human being.....
- (x) Mosses provide shelter for small organisms.....

3. Match the phrase in **List A** with responses 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)	Organisms which can manufacture their own food.	A	Preys
(ii)	Members of the same species living in the same area.	B	Decomposers
(iii)	Organisms which rely on other organisms for food.	C	Community
(iv)	A group of interdependent organisms living in an environment.	D	Predators
		E	Trophic level
(v)	Organisms which kill other organisms and feed on them wholly or in parts.	F	Population
		G	Producers
		H	Consumers

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) A process of taking air into the lungs of mammals is called.....
- (ii) A muscular sheet of tissue which separates the thorax from the abdomen is known as.....
- (iii) A process by which air diffuses in and out of the body across the respiratory surfaces is called.....
- (iv) The structure which protect the lungs from injury is known as.....
- (v) The structure which is used for gaseous exchange in spider is known as

SECTION B (50 Marks)

Answer **all** questions in this section.

5. (a) State the uses of each of the following laboratory apparatuses.

- (i) Mortar and pestle.....
- (ii) Petri dish.....

- (iii) Test tube rack.....
- (iv) Bunsen burner.....
- (v) Thermometer.....

(b) Differentiate the term zoology from botany.

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(c) How is Biology related to the field of nutrition? Briefly explain.

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6. (a) Why is it health to be advised to eat balanced diet?

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(b) If a child is suffering from kwashiorkor, which symptoms can be observed? State three.

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

(c) Give two natural sources of food which must be fed to the child to avoid kwashiorkor.

- (i)
- (ii)

7. (a) How is infection differs from disease?

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- (b) The following are different ways through which communicable diseases are transmitted. Name two diseases transmitted by each way.

(i) Sexual intercourse.....

(ii) Contaminated food and water.....

- (c) Why is it important to provide care and support to people living with HIV/AIDS?

Give four points.

(i)

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(ii)

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(iii)

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(iv)

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8. (a) Give two examples of each of the following found in the human body.

S/n	Tissue	Organ	System
(i)			
(ii)			

- (b) Outline four characteristics of a cell.

(i)

(ii)

(iii)

(iv)

- (c) What will happen if chloroplast is removed from a plant cell? Briefly explain.

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9. (a) What do you understand by the term "Transport of materials" as used in Biology?
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- (b) What will happen to the following? Briefly explain.
- (i) A plant cell is immersed in hypotonic solution.
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- (ii) The cardiac muscles in the heart stop working.
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- (c) How is leukaemia controlled? State three ways.
- (i)
- (ii)
- (iii)

SECTION C (20 Marks)

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

10. Elaborate three advantages and three disadvantages of the members of Kingdom Monera.
11. Explain the effects of poor waste disposal to the environment. Give six points.

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[illegible]

[illegible]

[illegible]