

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
FORM TWO SECONDARY EDUCATION EXAMINATION, 2011**

033

BIOLOGY**Time: 2½ HOURS****INSTRUCTIONS**

1. This paper consists of sections A, B and C.
2. Answer **ALL** questions from sections A and B and **ONE** question from section C.
3. **ALL** answers must be written in the spaces provided.
4. Write your examination number at the top right corner of every page.
5. **ALL** writing must be in blue or black ink **EXCEPT** for the diagrams which must be in pencil.
6. Cellphones are not allowed in the examination room.

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

SECTION A (30 MARKS)

1. Select the correct answer in each item and write its letter in the box provided.

(i) An experiment usually tests:

- A. application
- B. evaluation
- C. hypothesis
- D. problem identification

(ii) Animals show irritability, this means they:

- A. always move
- B. are capable of growing
- C. reproduce
- D. respond to stimuli.

(iii) The movement of substances in and out of the cell is controlled by:

- A. cell membrane
- B. cell wall
- C. cytoplasm
- D. vacuole.

(iv) The ability of human body to resist infections caused by microorganisms is known as

- A. immunity
- B. inoculation
- C. treatment
- D. vaccination.

(v) Muscle fatigue in the body is caused by:

- A. lack of carbon dioxide
- B. lack of lactic acid
- C. lack of oxygen
- D. pyruvic acid

(vi) One of the following is not a risky behaviour:

- A. accepting favours and gifts from people of the opposite sex
- B. having many sexual partners
- C. keeping good company and avoiding immoral friends
- D. using drugs such as bhang and cocaine.

(vii) The main product of photosynthesis is transported away from the leaves by the:

- A. cambium
- B. cortex
- C. phloem
- D. xylem

(viii) Rickets in children and osteomalacia in adults are conditions caused by lack of
A. vitamin A
B. vitamin B
C. vitamin C
D. vitamin D.

(ix) A person with blood group O has the following antibodies in his blood plasma:
A. antibody a
B. antibodies a and b
C. antibody b
D. antibody o

(x) Which of the following is not a member of kingdom fungi?
A. Euglena
B. Mucor
C. Mushroom
D. Yeast.

2. The following statements are either correct or not correct. Write **TRUE** if the statement is correct or **FALSE** if the statement is not correct.

(i) A group of interdependent organisms living in an environment is called a community.

(ii) A person with blood group AB is a universal donor. _____

(iii) Animal cells have no chloroplasts. _____

(iv) Before the blood returns to the heart it has to be oxygenated in the liver. _____

(v) Green plants are decomposers. _____

(vi) Maintaining personal hygiene reduces the risk of infection. _____

(vii) Malaria is transmitted by a plasmodium. _____

(viii) Proteins in the diet are needed for growth and repair. _____

(ix) Transpiration is not a necessary process to plants. _____

(x) Valves in veins prevent the backflow of blood. _____

3. Match the item in List A with the correct item in List B by writing its letter below the number of the item in List A in the table provided.

LIST A		LIST B
(i)	A disorder of the digestive system	A. Amylase
(ii)	An enzyme that converts lipids to fatty acids and glycerol	B. Constipation
(iii)	An enzyme that converts starch to maltose	C. Cow
(iv)	It contains an acidic medium for digestion	D. Duodenum
(v)	Sites for dumping waste and covering it with soil	E. Ferns
(vi)	The first part of the small intestine	F. Human being
(vii)	The process of burning waste until it is completely destroyed	G. Incineration
(viii)	The process of turning waste into new products	H. Landfills
(ix)	The stomach of this organism have four chambers	I. Lipase
(x)	They have true roots, stems and leaves.	J. Mosses
		K. Pit latrines
		L. Recycling
		M. Stomach
		N. Trypsin
		O. Typhoid

ANSWERS

LIST A	(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)
LIST B										

SECTION B (50 MARKS)

4. (a) Define the following terms:

(i) Classification

(ii) Binomial nomenclature

(b) Write three points on the importance of classification.

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

5. (a) What is blood circulation?

(b) Explain three points on the importance of blood circulation in human being.

- (i) _____

- (ii) _____

- (iii) _____

(c) Mention two disorders of human blood circulatory system.

- (i) _____
- (ii) _____

6. (a) What do you understand by the term “diffusion”?

(b) Name two structures concerned with gaseous exchange in plants.

- (i) _____
- (ii) _____

(c) Explain the importance of gaseous exchange in plants.

- (i) _____

- (ii) _____

7. (a) What is natural environment?

(b) Explain the importance of the natural environment.

- (i) _____

- (ii) _____

(c) Explain two significance of food chains and food webs in real life situation.

- (i) _____

- (ii) _____

8. (a) Outline four reasons why it is important to study Biology.

- (i) _____

- (ii) _____

- (iii) _____

- (iv) _____

(b) What is respiration?

(c) Differentiate between aerobic and anaerobic respiration.

	Aerobic respiration	Anaerobic respiration
(i)	_____	_____
(ii)	_____	_____
(iii)	_____	_____
(iv)	_____	_____

