

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

033

BIOLOGY**Time: 2:30 HOURS****Wednesday, 18th November 2015 a.m.****INSTRUCTIONS**

1. This paper consists of sections A, B and C.
2. Answer **all** questions from sections A and B and **one (1)** question from section C.
3. Answers must be written in the spaces provided.
4. All communication devices and calculator are **not** allowed in the examination room.
5. Except for diagrams that must be drawn in pencil, all writing should be in blue or black ink.
6. Write your **Examination Number** at the top right corner of every page.

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)

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) The following are methods involved when scientists study things systematically **except**
A Identifying the problem
B Guess the conclusion
C Formulating hypothesis
D Experimentation.

(ii) Which part of a microscope is responsible for magnification of a specimen?
A Mirror.
B Eyepiece.
C Stage.
D Base.

(iii) Which step will you first take when giving First Aid to a bus accident victim who has severe bleeding?
A Wash the wound with plenty water to remove blood.
B Loosen the tighten clothes to supply oxygen to victim.
C Use finger to apply pressure direct to the bleeding point.
D Ask a person to go to hospital immediately.

(iv) A viral disease transmitted through sexual intercourse is known as
A gonorrhea
B typhoid
C AIDS
D small pox.

(v) In the human digestive system the stomach is known as
A a tissue
B a cell
C an organ
D an organism.

(vi) Which of the following is **not** a proper method of waste disposal?
A Use of landfill.
B Make pit latrine.
C Recycling of materials.
D Burning plastic waste at home.

(vii) An organism with a rigid protective wall made up of chitin material is a representative of which Kingdom?

- A Fungi.
- B Monera.
- C Plantae.
- D Protoctista.

(viii) The disease and disorder of the human circulatory system includes

- A Arteriosclerosis and heart burn
- B Blood pressure and sickle cell anemia
- C Blood pressure and oedema
- D Leukemia and heart burn.

(ix) The end product of fat/lipids in digestion process is called

- A Amino acid
- B Peptide
- C Glucose
- D Fat acid and glycerol.

(x) The product of anaerobic respiration process in animals is

- A uric acid
- B lactic acid
- C sulfuric acid
- D hydrochloric acid.

2. Write **TRUE** if the statement is correct or **FALSE** if the statement is not correct.

- (i) A microscope is an instrument used to observe smaller objects which cannot be seen by using our normal eyes. _____
- (ii) Plant cells possess cellulose cell walls while animal cell do not have. _____
- (iii) We can use dry wooden stick to move a victim of electric shock from the source of electric current. _____
- (iv) Botanists study both plants and animals. _____
- (v) It is safe to warm the room by using charcoal when people are sleeping the whole night inside the room. _____
- (vi) Onion store food in leaves while carrots store food in root tubers. _____
- (vii) Gaseous exchange in fish takes place through the spiracles. _____
- (viii) Materials which can be recycled included aluminium cans and magazines. _____
- (ix) All living things are made up of small units known as cells. _____
- (x) Biology is the study of non-living things. _____

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

LIST A	LIST B
(i) A term used for organisms with four chambered stomach.	A Night blindness
(ii) Malnutritional disorder caused by deficiency of protein in children.	B Scurvy
(iii) Enzymes responsible for digestion of protein.	C Pepsin
(iv) Malformation of bones caused by deficiency of vitamin "D" in the diet.	D Pellagra
(v) Failure to see in dim light due to deficiency of vitamin "A" in a diet.	E Beri-beri
(vi) Painful sensation caused by regurgitation of stomach contents.	F Ulcers
(vii) Bleeding of gums and poor healing of the wound due to deficiency of vitamin "C".	G Rickets
(viii) Painful sore in the lining of the digestive system.	H Kwashiorkor
(ix) The substance responsible for coagulation of milk.	I Marasmus
(x) A person has loss of appetite, loss of nervous sensation due to deficiency of vitamin "B ₁ " in a diet.	J Dental caries
	K Heartburn
	L Rennin
	M Anoxia nervosa
	N Ruminants
	O Bulimia nervosa

ANSWERS

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

SECTION B (50 MARKS)

4. (a) List the major groups of living organisms.

- | | |
|-------------|------------|
| (i) _____ | (ii) _____ |
| (iii) _____ | (iv) _____ |
| (v) _____ | |

(b) Figure 1 represents an organism which feed on dead organic matter. Study the diagram carefully then answer the questions that follow:

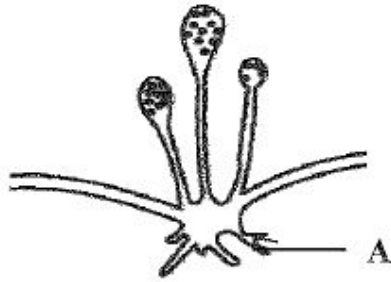


Figure 1

(i) What is the name of organism in Figure 1?

(ii) Name the part labelled with letter A.

(iii) Mention the Phylum in which the organism you named in (a)(i) belongs.

(c) Outline two disadvantages of Kingdom Fungi.

(i) _____

(ii) _____

5. (a) What do you understand by the term “personal hygiene”?

(b) State four principles of personal hygiene.

(i) _____

(ii) _____

(iii) _____

(iv) _____

(c) State four principles of good manner.

(i) _____

(ii) _____

(iii) _____

(iv) _____

6. (a) Define the following terms:

(i) Diffusion

(ii) Osmosis

(b) Explain why a red blood cell immersed in the low concentrated solution burst?

(c) State one function of each of the following blood cells:

(i) Red blood cell (Erythrocytes)

(ii) Platelets

7. (a) What is First Aid?

(b) List four components of the First Aid Kit.

(i)

(ii)

(iii)

(iv)

(c) State the procedures of giving First Aid to a person who has been bitten by a snake.

(i)

(ii)

8. (a) Define the terms “food chain” and “food web” as used in Biology.

(i) Food chain

(ii) Food web

(b) Construct a food chain by using the following organisms:

Grasses, Snake, Grasshopper, Frog.

(c) Explain the significance of food chain and food web in the real life situation.

(i)

(ii)

SECTION C (20 MARKS)

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

9. Explain the causes, mode of transmission and prevention measures of cholera as one of the communicable disease in Tanzania.

10. Describe the causes, mode of transmission and prevention measures of Tuberculosis diseases in the respiratory system.

Answer
