



Candidate's Examination Number .....

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

033

BIOLOGY

Time 2:30 Hours

Tuesday, 15<sup>th</sup> November 2016 a.m.

Instructions

1. This paper consists of sections A, B and C.
2. Answer **all** questions in sections A and B and **one** (1) question from section C.
3. Except for diagrams that must be drawn in pencil, all writings should be in blue or black pen.
4. Answers must be written in the space provided in this answer sheet.
5. Calculators and cellular phones are **not** allowed in the examination room.
6. Write your **Examination Number** at the top right corner of every page.

FOR EXAMINERS' USE ONLY		
QUESTION NUMBER	SCORE	EXAMINERS' INITIALS
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
<b>TOTAL</b>		

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SECTION A (30 Marks)

Answer **all** questions in this section.

1. For each of the items (i) - (x), choose the correct answer among the given alternatives and write its letter in the box provided.
- (i) Cholera is a disease transmitted by an organism called  
A Flea      B Housefly      C Mosquito      D Bacteria.
- (ii) Zoology is defined as the study of  
A Animals      B Fungi      C Plants      D Cells.
- (iii) The root-like structure of a Moss plant which provide anchorage to the ground is called  
A capsule      B spores      C seta      D rhizoids.
- (iv) A place where organisms are found is known as  
A society      B community      C habitat      D niche.
- (v) A secretion containing enzymes which digest both proteins and carbohydrates is known as  
A Bile      B Mucus  
C Pancreatic juice      D Saliva.
- (vi) Which of the following cell structure differentiate an animal cell from plant cell?  
A Cytoplasm      B Cell wall  
C Cell membrane      D Nucleus
- (vii) The valve separating the left auricle and left ventricle is called  
A bicuspid valve      B semilunar valve  
C tricuspid valve      D septum valve.
- (viii) Fire accident can be caused by the following **except**  
A electric fault.  
B burning of candles.  
C burning of charcoal stove.  
D smoking in areas selected as smoking zones.
- (ix) Oxygen passing from the atmosphere into the blood of a mammal takes one of the following routes:  
A bronchi - bronchioles - trachea - alveoli.  
B trachea - bronchioles - bronchi - alveoli.  
C trachea - bronchi - bronchioles - alveoli.  
D bronchioles - bronchi - trachea - alveoli.

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- (x) The correct hierarchical order of grouping organisms is
- A Kingdom, Phylum, Class, Order, Family, Genus, Species.
  - B Kingdom, Phylum, Order, Class, Family, Genus, Species.
  - C Species, Genus, Family, Order, Class, Phylum, Kingdom.
  - D Kingdom, Phylum, Class, Family, Order, Species, Genus.

2. In each of the following statements, write **TRUE** if a statement is correct or **FALSE** if a statement is not correct.

- (i) Beriberi, gonorrhoea and syphilis are diseases caused by bacteria.....
- (ii) Blood capillaries are narrow and their walls are one cell thick.....
- (iii) Rickets is prevented by increasing the amount of vitamin D in a diet.....
- (iv) Anaerobic respiration uses oxygen while aerobic respiration do not use oxygen.....
- (v) Gaseous exchange surface must have large alveoli.....
- (vi) Scientist uses beam balance to measure volume.....
- (vii) A person with blood group AB is called universal donor.....
- (viii) Heartburn is a disorder of digestive system.....
- (ix) Photosynthesis uses water and release oxygen.....
- (x) It is useless to keep a First Aid Kit at schools .....

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

List A	List B
(i) The highest rank of classification.	A Kingdom
(ii) A group of organism which can interbreed to produce viable offspring.	B Phylum
(iii) A sub group of Kingdom Plantae in which fern plant belongs.	C Class
(iv) A group of genera with similar characteristics.	D Species
(v) A sub division of a highest group of classification.	E Family
(vi) A sub group of Kingdom Fungi in which bread mold belongs.	F Genus
(vii) A sub group of Kingdom Fungi in which Mushroom belongs.	G Order
(viii) A sub group of Kingdom Fungi in which yeast belongs.	H Kingdom Monera
(ix) The highest group in which Bacteria belongs.	I Division Pteridophyta
(x) A sub group of Kingdom Plantae in which mosses belongs.	J Division Bryophyta
	K Kingdom Plantae
	L Phylum Zygomycota
	M Phylum Basidiomycota
	N Phylum Ascomycota
	O Kingdom Protoctista

**ANSWERS**

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

**SECTION B (50 Marks)**

Answer all questions in this section.

4. Figure 1 represents a diagram of simple animal cell. Study the diagram then, answer the questions that follow.

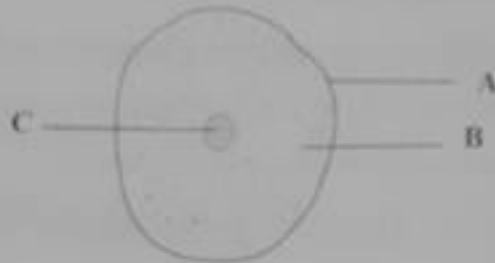


Figure 1

- (a) Name the parts labeled with letter A, B and C.
- A .....
- B .....
- C .....
- (b) Give the function of the part labeled by letter C
- .....
- .....
- (c) Give three differences between animal cell and plant cell.

	Animal cell	Plant cell
(i)	..... .....	..... .....
(ii)	..... .....	..... .....
(iii)	..... .....	..... .....



5. Define the following terms;

(i) Laboratory

.....  
.....

(ii) Biology

.....  
.....

(iii) Botany

.....  
.....

(b) State the uses of each of the following laboratory apparatus:

(i) Microscope.....

(ii) Thermometer.....

(iii) Test tube.....

(iv) Test tube holder.....

6. (a) What is the meaning of the following terms:

(i) Food chain.

.....  
.....  
.....

(ii) Trophic levels.

.....  
.....

(b) Construct a food chain using the following organisms:  
Sheep, Lion, Maize plant and Bacteria.

.....  
.....

7. (a) Name four major parts of the human alimentary canal.

(i) .....

(ii) .....

(iii) .....

(iv) .....

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(b) Give any three adaptations of ileum for the absorption of food in the alimentary canal.

(i) .....

(ii) .....

(iii) .....

8. (a) Mention four basic principles of waste disposal.

(i) .....

(ii) .....

(iii) .....

(iv) .....

(b) State three effects of poor waste disposal to the community.

(i) .....

(ii) .....

(iii) .....

**Section C (20 Marks)**

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

9. Explain three symptoms of hypertension and describe two measures that may help to prevent hypertension in human being.

10. Explain the cause, two symptoms, transmissions and prevention measures of cholera.

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