

Candidate's index number.....

**REGIONAL ADMINISTRATIVE AND LOCAL GOVERNMENT**

**KIBAHIA DISTRICT COUNCIL**

**FORM TWO MOCK EXAMINATION**

**SUBJECT: BIOLOGY**



**CODE: 033**

**TIME: 2:30 HOURS**

**WEDNESDAY 30th SEPTEMBER 2024**

**INSTRUCTIONS:**

1. This paper consists of three sections **A, B** and **C**, with a total of **eleven** questions.
2. Answer **ALL** questions in section **A, B** and **ONLY ONE** question in section **C**.
3. All writing should be on **blue** or **black** ink except for diagram that should be drawn by **pencil**.
4. All answers should be written on the **spaces** provided.
5. All unauthorized materials are **not** allowed in the examination room.
6. Write your **Index Number** on every page at the right top corner of the question paper

**FOR EXAMINER'S USE ONLY**

QUESTION NUMBER	SCORES	INITIALS OF EXAMINER
1.		
2.		
3.		
4.		
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6.		
7.		
8.		
9.		
10.		
<b>TOTAL</b>		
<b>Checker's initials</b>		

**Answer all questions in this section.**

1. Choose the correct answer among the given alternatives.

- (i) Botany is the study of:  
A. Animals  
B. Cells  
C. Bones ( )  
D. Plants
- (ii) Bleeding in gums is symptom which can be shown by a person suffering from:  
A. Rickets  
B. Scurvy  
C. Beriberi ( )  
D. Pellagra
- (iii) If a total magnification of object under observation is X 150 and objective lens magnification is X 15. What will be the eyepiece lens magnification?  
A. X 10  
B. X 15  
C. X 100 ( )  
D. X 2250
- (iv) Viruses are: ( )  
A. Eukaryotes  
B. Prokaryotes  
C. Both eukaryotes and prokaryotes  
D. Neither eukaryote nor prokaryotes
- (v) The part of alimentary canal which rolls the chewed food into bolus is called  
A. Pharynx  
B. Tongue  
C. Oesophagus( )  
D. Epiglottis
- (vi) Which of the following will be a step to follow in a scientific procedure after formulating a hypothesis? ( )  
A. Conclusion  
B. Observation  
C. Experimentation  
D. Problem identification
- (vii) The process by which carbon dioxide pass from the blood into alveoli of lungs is called:  
A. Osmosis  
B. Mass flow  
C. Breathing ( )  
D. Diffusion

- (viii) The ability of a human body to resist infection by disease causing micro-organisms is known as:
- A. Vaccination  
B. Inoculation  
C. Vaccine  
D. Immunity
- (ix) The product of anaerobic respiration process in animals is:
- A. Lactic acid  
B. Carbon dioxide  
C. Alcohol  
D. Water
- (x) The car uses petrol and give out smoke, in living things this is equivalent to:
- A. Movement and respiration  
B. Locomotion and nutrition  
C. Nutrition and respiration  
D. Nutrition and excretion

[illegible]

2. The following statements are either TRUE or FALSE. Write **TRUE** for correct statement and **FALSE** for incorrect statement.
- (i) Oxygen gas is not important for plant life.....
  - (ii) A plant cell has a large permanent vacuole.....
  - (iii) Osmosis is the movement of molecules from a region of high concentration of water to a region of low concentration of water through a semi-permeable membrane.....
  - (iv) A group of interdependent organisms living in an environment is called a community.....
  - (v) A power house of a cell is called nucleus.....
  - (vi) Xylem vessels transport water and mineral salts from the roots to the leaves.....
  - (vii) Cold is one of the causes of muscle cramp.....
  - (viii) Good manner involves talking while eating.....
  - (ix) Commensalism is the interaction between two species in which both organisms benefit.....

(x) The pulmonary vein carries deoxygenated blood.....

3. Match the items in list A with the correct response in list B by writing the letter of the correct answer.

LIST A	LIST B
(i) The highest rank of classification	A. Genus and species
(ii) The sub group of kingdom plantae in which fern plants belong	B. Species
(iii) The ranks of classification in which the scientific name of an organism is generated	C. Phylum Basidiomycota
(iv) A sub group of kingdom plantae in which mosses belong	D. Kingdom
(v) A sub group of kingdom fungi in which mushroom belongs	E. Division pteridophyta
	F. Class
	G. Phylum Ascomycota
	H. Phylum
	I. Family and species
	J. Division Bryophyta

i	ii	iii	iv	v

4. In the table below identify biological names and their function of the given description.

Description	Biological names	Functions
(i) Green pigments in plants		
(ii) Small pores in the epidermis of the plant		
(iii) Red pigments in the blood		
(iv) Pale yellow fluid in the blood of mammals		
(v) Green fluid squirted bit by bit into the duodenum		

	Biological names	Functions
i		
ii		
iii		
iv		
v		

### SECTION B (50 MARKS)

**Answer all questions in this section.**

5. (a) Define the following terms:

(i). Cell

.....  
 .....

(ii) Cell differentiation

.....  
 .....

(b) Name part of the cell that performs the following:

(i) Control life processes in the cell.....

(ii) The site of photosynthesis.....

(iii) Control entering and leaving of material in the cell.....

(iv) The site of chemical reactions in the cell.....

6. (a) Define the following terms:

(i) Laboratory

.....  
.....

(ii) Biology

.....  
.....

(iii) Test tube

.....  
.....

(iv) Zoology

.....  
.....

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

(i). Microscope

.....  
.....

(ii) Thermometer

.....  
.....

(iii) Test tube holder

.....  
.....

7. (a) Define the following terms:

(i) Diffusion

.....  
.....

(ii) Mass flow

.....  
 .....

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

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

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

(i) White blood cells

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

(ii) Platelets

.....

8. (a) What is respiration?

.....  
 .....

(b) Differentiate between aerobic and anaerobic respiration ( Four points).

Aerobic respiration	Anaerobic respiration
i.	
ii.	
iii.	
iv.	

(c) Explain five factors that affect the rate of respiration.

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9. (a) Give the meaning of the following:

- (i) Food chain  
.....  
.....
- (ii) Food web  
.....  
.....
- (iii) Producers  
.....  
.....
- (iv) Decomposers  
.....  
.....



(b) Study figure X below and answer the given questions:

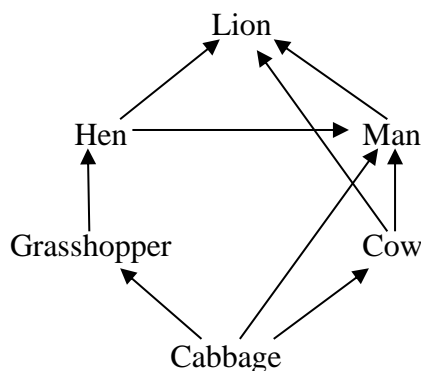


Figure X

- (i) Name the feeding relationship presented by figure X.....
- (ii) Predict the missing group in figure X.....

(c) Choose the organisms from figure X which is:

- (i) Producer.....
- (ii) Predator.....
- (iii) Primary consumer.....

### SECTION C (20 MARKS)

**Answer only one question in this section**

10. Write an essay on photosynthesis using the following guidelines:

- Meaning of photosynthesis
- Raw materials of photosynthesis
- Conditions necessary for photosynthesis
- Importance of photosynthesis
- Three factors affecting the rate of photosynthesis

11. Write an essay on waste disposal, under the following guideline:

- Meaning of waste
- Types of waste according to their physical state with two examples in each type.
- Proper methods of disposing waste, with one example in each method
- Importance of proper waste disposal.

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