



Total score

Name .....

School.....

Roll No.....

Republic of Somaliland  
Somaliland National Examination Board  
Form Four

**BIOLOGY**  
Examination

Ombiology4u

**June 2022**

**TIME 2 HOURS**

**Plus 10 minutes for reading through paper**

**INSTRUCTIONS TO CANDIDATES**

- This paper consists of 12 printed pages
- Count them now. Inform the invigilator if there are any missing or extra pages.

There are two parts:

PART ONE:	Multiple Choice Questions	40 Marks
PART TWO:	Structured Questions	60 Marks
	<b>TOTAL</b>	<b>100 Marks</b>

- Answer ALL questions in part 1 and 2.
- No extra paper and Mobiles is allowed.



**PART ONE: Multiple Choice Questions**

**(40 Marks)**

1. Tuberculosis is an example of
  - a. Social diseases
  - b. Infectious diseases
  - c. Inherited diseases
  - d. Physical diseases
  
2. Infection of the skin including athlete's foot, jock itch and ringworm are counted as
  - a. Fungal diseases
  - b. Viral diseases
  - c. Bacterial diseases
  - d. Protozoal diseases
  
3. \_\_\_\_\_ Is the state of the body where by all organs and systems function normally
  - a. Viral diseases
  - b. Bacteria diseases
  - c. Health
  - d. Diseases
  
4. Which of the following does not belong to general methods of diseases control in livestock?
  - a. Sanitation
  - b. Improper feeding
  - c. Culling
  - d. Control of parasite
  
5. The process by which defense cells are attracted to the bacteria is known as
  - a. Endocytosis
  - b. Chemotaxis
  - c. Attachment
  - d. Vacuole formation

6. Antibodies are produced by
- Plasma cells of B cells
  - T cells
  - Phagocytes
  - All
7. All of the following are symptoms of parasite infections except
- Anemia
  - Diarrhea
  - Swelling in the jaw or other areas
  - Hair loss
8. Which of the following parasites causes blockage of intestine and rough coat in livestock?
- Liver flukes
  - Round worms
  - Tape worms
  - Lice
9. Which of the following nitrogenous base pairs in a nucleic acid is NOT correct?
- Adenine to Adenine
  - Cytosine to Guanine
  - Adenine to Thymine
  - Adenine to Uracil
10. Which one of the following is NOT the function of DNA?
- Controlling all cell activities
  - Coding for proteins
  - Controlling the development, reproduction and characteristics of organism
  - Producing proteins without transcription

11. Below diagram shows you several types of mutations

Identify delectation mutation

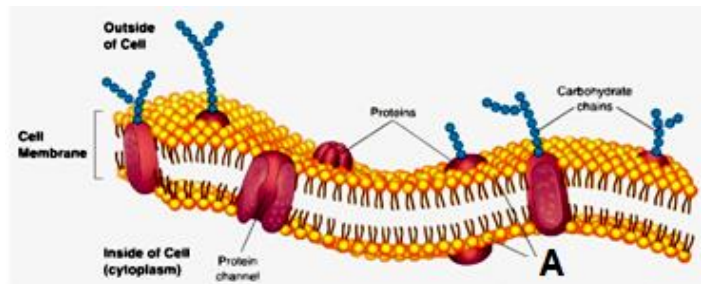
- |              |             |
|--------------|-------------|
| a. A-B-C-D-E | A-B-D-E     |
| b. A-B-C-D-E | A-B-B-C-D-E |
| c. A-B-C-D-E | E-B-C-D-A   |
| d. A-B-C-D-E | A-B-C-D-E   |

12. Which one of the following is NOT true about the reasons for making livestock breeding?

- a. To breed animals for economic purpose
- b. To certify consumer taster
- c. To decrease the number of offspring
- d. To expand the inherited potential of animal

13. The part labeled by A is

- a. The nucleus
- b. The lipid bilayer
- c. Mitochondria
- d. Golgi apparatus



14. Support, movement and giving shape to the cells are function of

- a. Cytoskeleton
- b. Plasma membrane
- c. Nuclease
- d. Ribosomes

15. The part of tooth that is visible above the gum is called

- a. Crown
- b. Root
- c. Cement
- d. Pulp cavity

16. Which one of the following does NOT belong to the various ways in which light affects the rate of photosynthesis?
- a. Light intensity
  - b. Day length
  - c. Light quality
  - d. Science of light
17. Healthy person at rest breaths in and out about \_\_\_\_\_of air
- a. 200 ml
  - b. 1000 ml
  - c. 500 ml
  - d. 900 ml
18. People of blood group \_\_\_\_\_ are called universal donors
- a. A
  - b. B
  - c. AB
  - d. O
19. The method of fertilizer application in which the fertilizer is first dissolved in water and gradually released in solution form is known as
- a. Side dressing
  - b. Drip method
  - c. Band placement
  - d. Ring placement
20. Which of the following practices produce vegetables?
- a. Horticulture
  - b. Bee keeping
  - c. Fish farming
  - d. Poultry farming

**PART TWO: Structured Questions**

**(60 Marks)**

1. There are many categories of diseases recognized

a) Describe physical disease.

(2 Marks)

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b) What is the other name for communicable diseases?

(2 Marks)

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c) Explain the main difference between acute diseases and chronic diseases

(2 Marks)

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d) Give one example of pandemic diseases

(2 Marks)

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2. Causes of livestock diseases are grouped into several groups

a) Identify two living organisms that cause diseases to livestock

( 2 Marks)

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b) Why is cattle dehorned?

( 1Mark)

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c) Explain the advantages of caponization.

(2 Marks)

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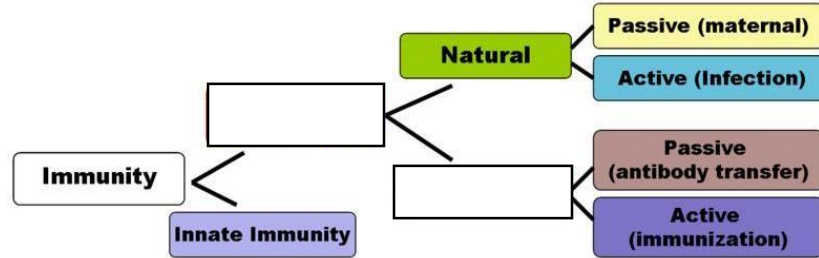
d) Why hoof is trimmed from livestock?

(1 Mark)

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3. Consider the following diagram on types of immunity to answer the related questions.

a. Fill the empty boxes (2 Marks)



b. Distinguish between active Immunity and passive immunity ( 2 Marks)

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c. Is immunization artificial passive immunity or artificial active immunity? (1 Mark)

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d. Exposure to an infectious agent is a natural active immunity. Explain why (1 Mark)

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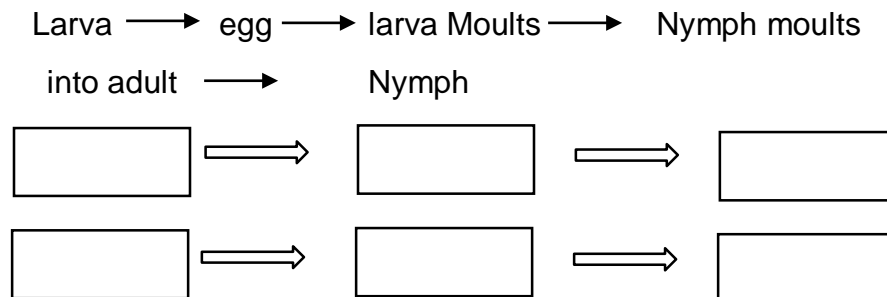
4. A parasite is an organism which obtain it is live hood from another organism (host) that suffers damage

a. Identify any two effects of parasites (1 Mark)

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b. Arrange the following stages of the life cycle of ticks (3 Marks)





c. How do external and internal parasites differ from each other (2 Marks)

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5. Heterozygous tall man is married with a homozygous short woman

b. How many phenotypes are there? (1 Mark)

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c. What is the phenotypic ratio? (1Mark)

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d. How many genotypes are there (2Marks)

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6. Cell division is a process of producing two or more cells from a single parent cell.

a) Compare between mitosis and meioses according to the types of cell they occur in (2 Marks)

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b) In which stage do spindle fibers attach to the centromeres of each chromosome? (1Mark)

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c) Which type of division produces identical cells (1Mark)

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d) Describe cytokinesis (2 marks)

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7. Plasma membrane must carry out several functions

a. State function of plasma membrane (2 Marks)

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b. Mention any two membrane proteins (2 Marks )

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c. In which organelle does cellular respiration take place? (1Mark)

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d. Describe composition of cytoplasm (1 Mark)

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8. Nutrition is process by which organisms obtain food from consumption use in the body

a. Why do organisms require food? ( 1 Mark)

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b. Name the two major types of nutrition (2 Marks)

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C. Explain autotrophic nutrition (2 Marks)

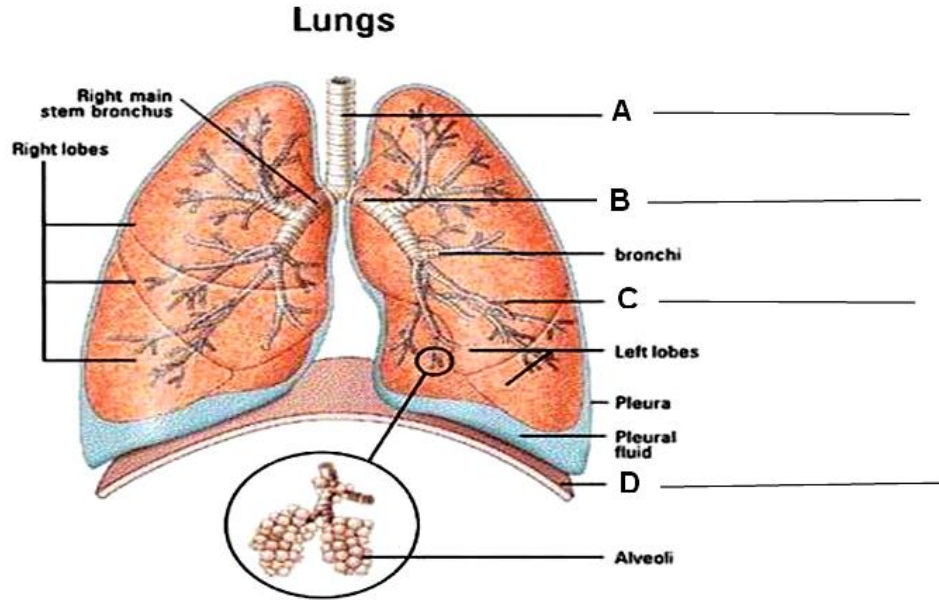
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d. Sometimes energy for food synthesis comes from chemicals and not from the sun. This process is referred to as: (1 Mark)

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9. Ventilation refers to the mechanism involved in bringing in fresh air to the lungs and removing used air

a. Label the below respiratory diagram A, B, C and D (2 Marks)



b. Put the respiratory structure ( trachea , larynx , nasal cavity, bronchioles , pharynx and bronchi) in the correct pathway order taken by the inspired air (3 Marks)

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c. Cigarettes smoke inhibits the action of cilia in the respiratory tract. What effect results in from this inhibition? (1 Mark)

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10. There are three types of organic manure: green manure, farm yard manure and composite manure.

a) Describe composite manure (2 Marks)

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b) Inorganic fertilizers can be classified into four different ways. Name any two of them. (2 Marks)

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c) Explain mixing farming (2 Marks)

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**END**



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