

R&PUBLIC OF SOMALILAND

FORM FOUR EXAMS, 2022

BIOLOGY



NATIONAL EXAMINATION BOARD



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Total score

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Name

School.....

Roll No.....

Republic of Somaliland

Somaliland National Examination Board

Form Four

BIOLOGY

2022

TIME 2 HOURS

Plus 10 Minutes for reading through paper

INSTRUCTIONS TO CANDIDATES

- This paper consists of 15 printed pages
- Count them now Inform the invigilator if there are any missing or extra pages.

There are two parts:

PART 1: multiple Choice Questions

40 Marks

PART 2: structured Questions

60 MARKS

TOTAL 100 MARKS

- Answer all questions
- No extra paper is allowed

[illegible]

PART1: MULTIPLE CHOICE QUESTION, THE CIRCLE THE CORRECT ANSWER (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. anti body are produced by

- a. Plasma cells of B cells
- b. T cells
- c. Phagocytes
- d. All

7. All of the following are symptoms of parasite infection except

- a. Anemia
- b. Diarrhea
- c. Swelling in the jaw or other areas
- d. Hair loss

8. which one of the following parasite causes blockage of intestine and rough coat in livestock ?

- a. Liver flukes
- b. Round worms
- c. Tape worms
- d. Lice

9. which of the following nitrogenous bases pairs in nucleic acid is NOT correct ?

- a. Adenine to adenine
- b. Cytosine to guanine
- c. Adenine to thymine
- d. Adenine to uracil

10. which one of the following is NOT function of DNA ?

- a. Controlling all cell activities
- b. Coding of proteins
- c. Controlling the development reproduction and characteristics of organism
- d. Producing proteins without transcription

11. Below diagram shows you several types of mutations

Identify deletion 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 ?

- To breed animals for economic purpose
- To certify consumer taster
- To decrease the number of offspring
- To expand the inherited potential of animal

13. the part labeled by A is

- The nucleus
- The lipid bilayer
- Mitochondria
- Golgi apparatus



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

- Cytoskeleton
- Plasma membrane
- Nuclease
- Ribosomes

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

- Crown
- Root
- Cement
- 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.A health 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 produced 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??

(1Marks)

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c) Explain the advantages of carbonization.

(3 Marks)

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d) Why hoof is trimmed from livestock?

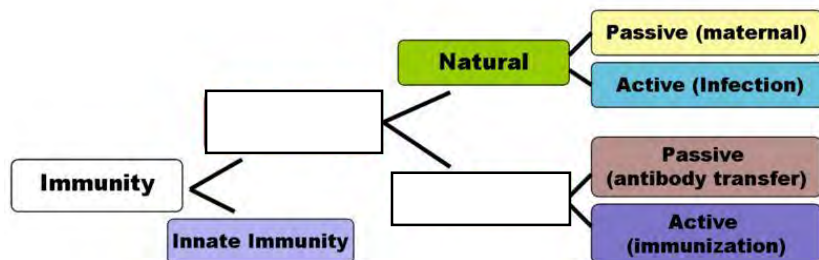
(1 marks)

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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 (1 marks)

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c. Is immunization artificial passive immunity or artificial active immunity explain why (1 marks)

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d. Exposure to an infectious agent is a natural active immunity. Explain why

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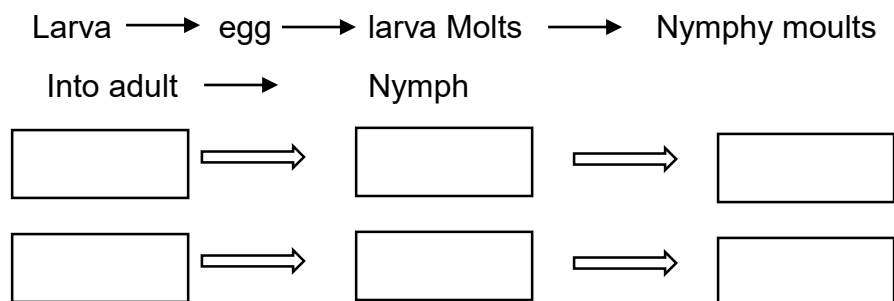
4. A parasite is an organism which obtain it is live hood from another organism (host) that suffer damage

a. Identify any two effects of parasite

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b. Arrange the following stages of the live cycle of ticks



- 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 Marks)

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- c. What is the phenotypic ratio ? (1Marks)

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- d. How many genotypes are there (2Marks)

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

- a) Compare between mitosis and meiosis according to the types of cells they occur in (3marks)

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- b) in which stage do spindle fibers attach to the centromere of each chromosome (1Marks)

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- c) which type of division produces identical cells (1Marks)

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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. I which organelle does cellular respiration take place? (1 Marks)

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d. Describe composition of cytoplasm (1 Marks)

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

a. Why do organism require food? (1 marks)

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

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C. Explain autotrophic nutrition

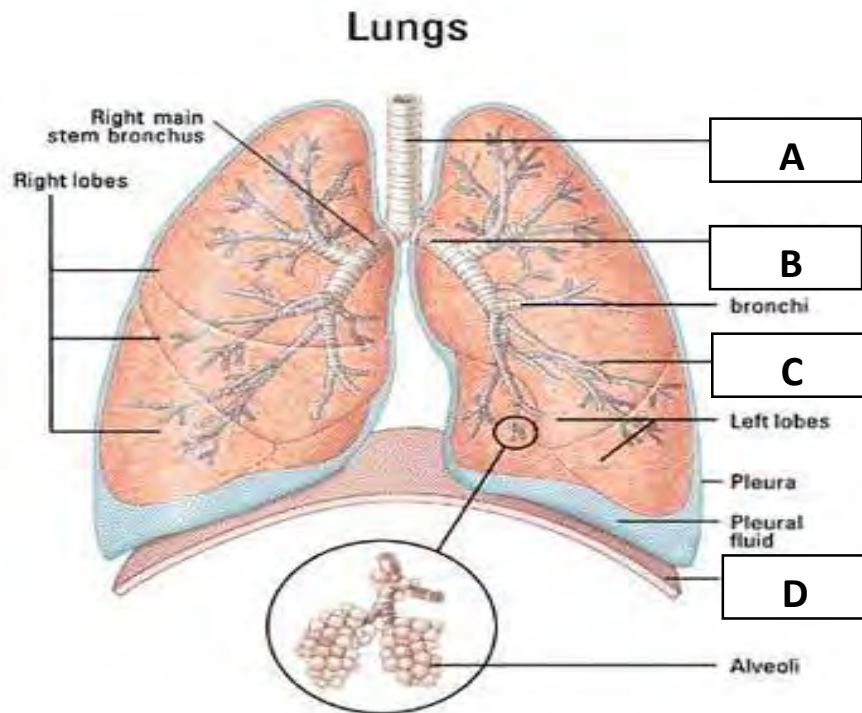
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d. Sometimes energy for food synthesis comes from chemicals and not from the sun. this process is referred to as :

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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

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- c. Cigarettes smoke inhibits the action of cilia in the respiratory tract what effect results in from this in habitation

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

a) Describe composite manure

(2 Marks)

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b) In organic fertilizers can be classified into four different ways . Name any two of them

(2Mark)

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c) Explain mixing farming

(2 marks)

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END

