

# KENYA HIGH SCHOOL

## MOCK EXAMINATIONS

### BIOLOGY PAPER 1 FORM 4

2021

*Kenya Certificate of Secondary Education*

1. Name the reagent used for testing presence of (3 marks)

(a) Starch

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(b) Reducing sugars

.....

(c) Vitamin c

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2. State the processes which occur in each of the following organelles. (2 marks)

(a) Chloroplast

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(b) Mitochondrion

.....

(c) Ribosomes

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3. A student observed a specimen through a light microscope. He used the objective lens marked X40. If he indicated the magnification of the image as x 400, what was the eye - piece magnification?

(Show your working).

(3 marks)

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4. State the function of the following in mammalian trachea. (3 marks)

(a) Rings of cartilage

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(b) Mucus

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(c) Cilia

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5. (a) What do you understand by the term biological control? (1 mark)

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.....  
(b) Explain why all the energy produced by producers does not flow to the tertiary consumers. (2marks)

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6. Name any three forces that maintain the transpiration stream (3 marks)

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7. Give the form in which the following gases are transported in blood. (3 marks)

(a) Oxygen

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(b) Carbon (IV) oxide

.....  
(c) Carbon (II) oxide

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8. (a) Name the main group of organisms which comprise the Kingdom Monera. (1mark)

.....  
(b) State any three ways in which the organisms named in 8 (a) above affect human lives. (3marks)

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.....  
(d) State the main characteristics of Monera which distinguish it from all other kingdoms. (1 mark)

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9. State ways in which the xylem tissue is adapted to carry out its function. (3marks)

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10. Why is it necessary for an athlete to breathe heavily after running? (2 marks)

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11. State ways in which the following diseases can be prevented

(a) Typhoid and amoebic dysentery (2 marks)

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(b) Malaria (2 marks)

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12. What are the three distinguishing features of phylum Arthropoda? (3marks)

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13. (a) Name the main product of the dark stage of photosynthesis. (1mark)

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(b) What is the role of chlorophyll during photosynthesis (2mark)

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14. Name three mechanisms that prevent self-pollination in flowers that have both male and female parts. (3 marks)

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15. State three applications of anaerobic respiration. (3 marks)

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16. What is the significance of highly folded inner membrane of a mitochondrion? (2 marks)
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- .....
- .....
17. Why is it necessary for blood from the gut to pass through the liver before joining general circulation? (2 marks)
- .....
- .....
- .....
18. A person's urine tested positive for reducing sugars.
- (a) Name the type of sugar present in the urine. (1 mark)
- .....
- (b) Name the gland and the hormone which failed to control the above condition. (2 marks)
- Gland
- .....
- Hormone
- .....
- (c) Which disease was the person suffering from? (1 mark)
- .....
19. State two roles played by the process of reproduction. (2 marks)
- .....
- .....
- .....
20. What is the habitat of the following plants? (3 marks)
- (i) Xerophytes
- .....
- (ii) Hydrophytes
- .....
- (iii) Halophytes
- .....
21. (a) State ways in which molars are adapted to their functions. (2 marks)

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(b) Name any two dental diseases. (2 marks)

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22. How is the sperm cell adapted to carry out its function? (3 marks)

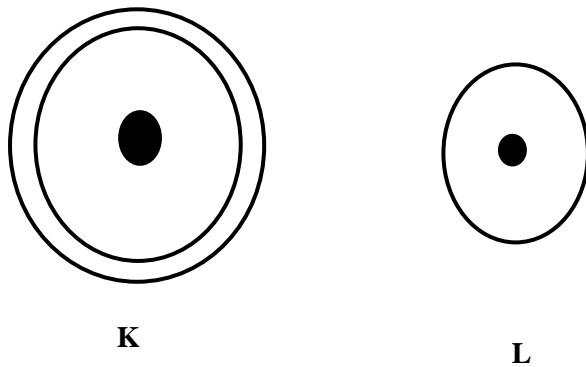
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23. The following are diagrams of two pollen grains.



(a) State one observable difference between K and L. (1 mark)

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(b) State the agent of pollination for each of them. (2 marks)

K

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L

.....

24. How do sunken stomata reduce transpiration? (2marks)

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25. Give the classes to which the following animals belong.

( 3marks)

(a) Human being

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(b) House fly

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(c) Spider

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26. (a) State one event that occurs in prophase of meiosis I which does not occur in prophase of mitosis.

(1 mark)

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(b) What are the results of the above phenomena?

(2 marks)

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27. Explain why growing grass die a few days when salt is sprinkled on it.

(3marks)

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