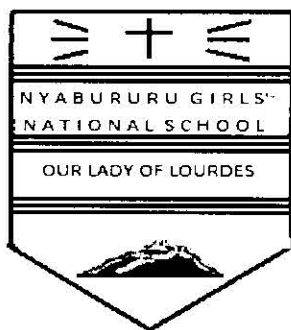


NAME.....CLS.....C.NO.....ADM.....



DATE DONE.....

INVIGILATOR.....

DATE RETURNED.....

DATE REVISED.....

BIOLOGY PAPER ONE
MARCH SERIES
KCSE TRIAL EXAMS 2016
TIME: 2 HOURS

INSTRUCTIONS

- ❖ Write your name, class, class number and adm no. in the spaces provided above.
- ❖ Answer all questions in the spaces provided.

FOR EXAMINER'S USE ONLY

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1 – 25	80	
TOTAL	80	

1. State the role of the following hormones in metamorphosis in insects.

(a) Juvenile hormone

(1 Mk)

.....
.....

(b) Ecdysone

(1 Mk)

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.....

2. Explain why a pregnant woman excretes less urea compared to a woman who is not pregnant.

(2 Mks)

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.....

3. State the role of catalase enzymes in living tissues.

(2 Mks)

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4. Distinguish between guttation and transpiration.

(2 Mks)

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5. (a) Name the types of chromosomal mutation represented by letters w, x and y.

(3 Mks)

W
X
Y

(b) State four benefits of polyploidy in plants to a farmer. (4 Mks)

- (i)
- (ii)
- (iii)
- (iv)

6. Explain what would happen to onion epidermal cells if they were placed in distilled water. (3 Mks)

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7. Explain three adaptations of a human sperm to the functions. (3 Mks)

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8. Differentiate between continuous variation and discontinuous variation. (2 Mks)

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9. The section below shows a section through a plant organ.



(a) Name the class of the plant from which the section was obtained. (1 Mk)

.....

.....

(b) Give reasons for your answer in (a) above. (2 Mks)

.....

.....

(c) Name the organ of the plant from which the section was obtained. (1 Mk)

.....

(d) Name the part labelled x. (1 Mk)

.....

10. What is meant by; (3 Mks)

(a) A notochord

.....

.....

(b) Parthenocarpy

.....

.....

(c) Prokaryotic organism

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11. Mushrooms, yeast and penicillium are common examples of Fungi. State their two importance to human beings. (3 Mks)

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12. Define the terms; (2 Mks)

(a) Habitat

.....

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(b) Ecosystem

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.....

13. In an experiment it is observed that when maggots are exposed to light, they move to dark areas. On the other hand Euglena and chlamydomonas move towards light.

(a) Name the type of response exhibited by the organisms. (1 Mk)

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.....

(b) State the advantage of the response shown by the maggots. (1 Mk)

.....

.....

14. Give two ways in which the alimentary canal of man is protected from the protein digesting enzymes. (2 Mks)

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.....

15. Give reasons for the following observations.

(a) The gill bar of a fish is curved. (1 Mk)

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.....

(b) Blood and water flow shows a counter – current flow in the gill of the fish. (1 Mk)

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(c) The skin of the frog is ever wet. (1 Mk)

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.....

16. Name the disease caused by each of the following.

(a) Bordetella pertussis (1 Mk)

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(b) Vibrio cholerae (1 Mk)

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(c) Plasmodium vivax (1 Mk)

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17. Explain how the hair helps in temperature regulation when it is cold. (3 Mks)

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18. (a) Distinguish between analogous and homologous structures. (2 Mks)

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(b) State two ideas proposed by Lamark's theory of evolution. (2 Mks)

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(c) In view of modern genetics why is Lamark's theory unacceptable? (1 Mk)

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19. (a) Name the type of skeleton that Arthropods have. (1 Mk)

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(b) What substance is the Arthropod's skeleton made of? (1 Mk)

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.....

(c) State a functional difference between a tendon and ligament. (1 Mk)

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.....

20. Name the organelles that carry out the following functions. (3 Mks)

(a) Packages synthesized material

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(b) Synthesizes ribosomes

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(c) Forms spindle fibres

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21. (a) State one structural and one functional difference between motor and sensory neurons.

Structural difference

(1 Mk)

.....

.....

Functional difference (1 Mk)

.....
.....

(b) State the functions of the following parts of a human eye.

(i) Sclerotic layer (1 Mk)

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.....

(ii) Choroid layer (2 Mks)

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.....

(iii) Aqueous humour (1 Mk)

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22. (a) Name the part of a bean seed that elongates to bring about epigeal germination. (1 Mk)

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(b) State two environmental conditions that cause seed dormancy. (2 Mks)

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.....

23. (a) What is meant by the following terms.

(i) Epinyous flower. (1 Mk)

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(ii) Staminate flower. (1 Mk)

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(b) State three advantages of cross pollination. (3 Mks)

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NAME.....CLS.....C.NO.....ADM.....

24. How are leaves of sub-mergent plants adapted to photosynthesis. (3 Mks)

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25. (a) Name the disease caused by lack of each of the following in human diet. (2 Mks)

(i) Vitamin D

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(ii) Iodine

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(b) Why does lack of roughage in a diet lead to constipation. (1 Mk)

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