

NAME:.....  
SCHOOL:.....

INDEX NO:.....  
DATE:.....  
SIGN:.....

231/1  
BIOLOGY  
PAPER I  
(THEORY)  
JULY/AUGUST 2012  
TIME: 2 HOURS

**MARAKWET WEST DISTRICT JOINT EVALUATION TEST– 2012 (MAWESSE)**  
*Kenya National Examination Council (K.C.S.E)*

231/1  
BIOLOGY  
PAPER I  
(THEORY)  
JULY/AUGUST - 2012  
TIME: 2 HOURS

**INSTRUCTIONS TO CANDIDATES**

- (a) Write your name and Index number in the spaces provided.
- (b) Sign and write the date of examination in the spaces provided above.
- (c) Answer ALL questions in the spaces provided.

**FOR EXAMINERS USE ONLY.**

QUESTIONS	MAXIMUM SCORE	CANDIDATE'S SCORE
1 – 32	80	

*This paper consists of 8 printed pages.  
Candidates should check the question paper to ascertain that all pages are printed as indicated and that  
no questions are missing.*

1. Name **two** causes of variations in organisms (2 mks)

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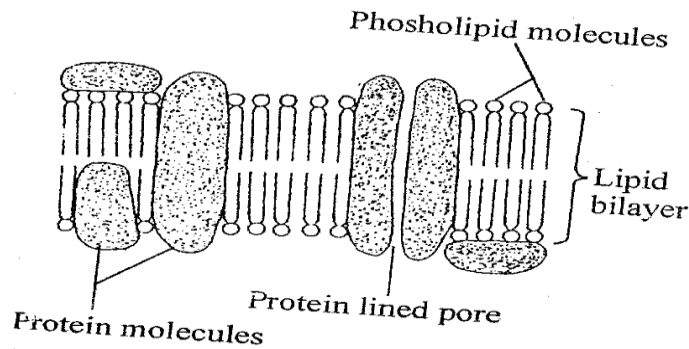
2. How does salting food prevent spoilage? (2 mks)

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3. The diagram below represents part of one of the cell structures.



(a) Identify the structure. (1 mk)

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(b) State **two** functions of the structure identified in 3 (a) above. (2 mks)

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4. (i) Give a reason why digestion of starch stop shortly after it enters into the stomach. (1 mk)

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(ii) Name a factor that denatures enzymes. (1 mk)

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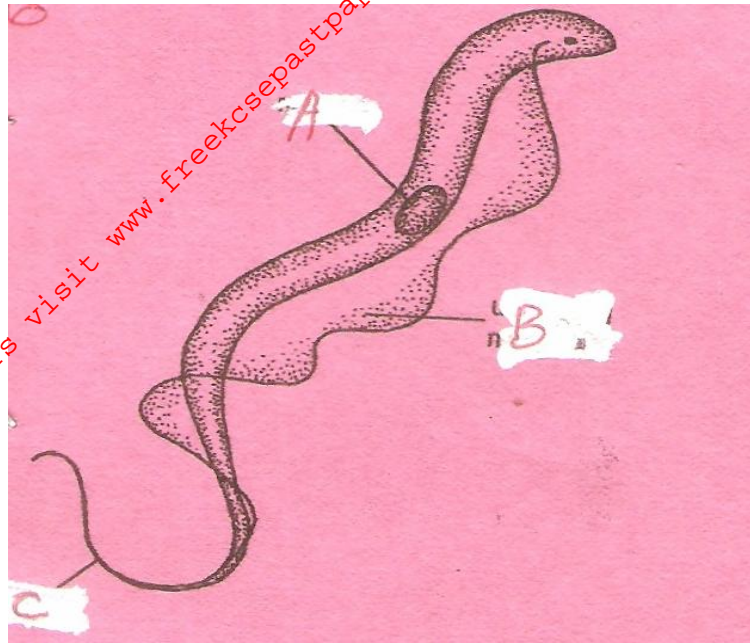
5. Distinguish predation from parasitism. (2 mks)

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6. The following diagram represents a certain parasite that can cause diseases in some animals



(a) Identify the kingdom in which the parasite belongs (1 mk)

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(b) Name the part labeled C (1 mk)

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(c) Name the disease that this parasite causes in human and its vector. (2 mks)

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7. Outline the stages involved in the evolution of new species by natural selection (4 mks)

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8. Apart from magnifying objects, state the other functions of a microscope. (1 mk)

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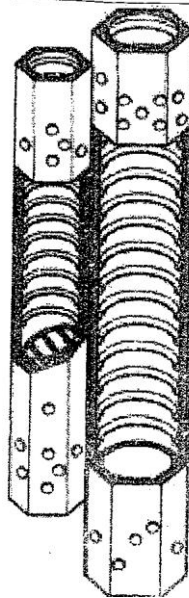
9. Name **two** advantages of red blood cells being involved in the carriage of carbon (iv) oxide. (2 mks)

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10. The cells shown below are adapted for transport in flowering plants.



(a) Name the tissue in which these cells are found. (1 mk)

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(b) Identify and explain **two** observable features of these cells that adapt them to their role in transport. (2 mks)

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11. In an experiment, it was found that when maggots are exposed to light, they move to dark areas.

(a) Name the type of response exhibited by the Maggots. (1 mk)

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(b) Name the advantages of the response to the Maggots. (2 mks)

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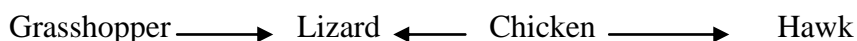
12. State **two** adaptations of submerged aquatic plants for gaseous exchange. (2 mks)

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13. Explain why sexual reproduction is important in organisms. (3 mks)

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14. The following is a food chain that was presented by a pupil in a class.



State the errors that are in the food chain. (2 mks)

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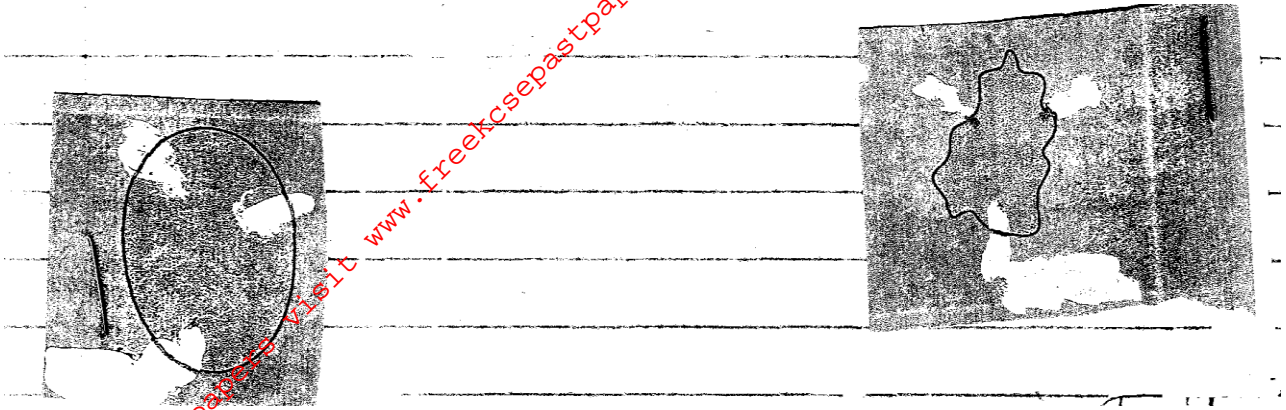
15. (a) What is the test cross and its significance? (2 mks)

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(b) What would be the expected results from a test cross? (2 mks)

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16. The diagrams below show a red blood cell that was subjected to a certain treatment.



(a) Account for the shape of the cell at the end of experiment. (2 mks)

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(b) Draw a diagram to illustrate how a plant cell would appear if subjected to the same treatment. (1 mk)

17. Name three mechanisms that prevent self pollination in flowers that have both male and female parts. (3 mks)

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18. State two advantages for an animal being homoiothermic than it is for it to be Poikilothermic (2 mks)

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19. (a) Name an animal phylum that possess exoskeleton made up of chitin. (1 mk)

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(b) (i) How is an exoskeleton beneficial to the animal phylum named in 19(a) above. (2 mks)

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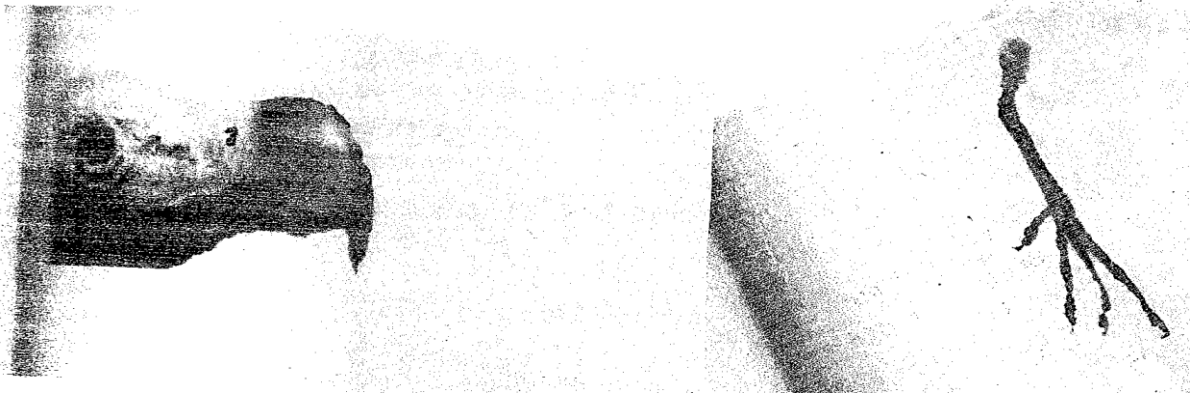
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(ii) State one disadvantage of the exoskeleton to the concerned animal. (1 mk)

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20. The diagrams below illustrates a beak and talons of a certain bird species



(i) Identify the mode of feeding of the bird. (1 mk)

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(ii) Using the observable features, explain how the bird is adapted for obtaining food in their habitat. (2 mks)

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21. Name two areas in human body where active transport takes place. (2 mks)

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22. State the effects of run off water rich in inorganic fertilizers on an aquatic habitat. (3 mks)

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23. What is the difference between a centipede and a millipede? (2 mks)

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24. Name any two strengthening tissues in herbaceous plant stems. (2 mks)

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25. (a) How is anaerobic respiration applied in sewage treatment? (1 mk)

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(b) State two economic importance of anaerobic respiration in fungi. (2 mks)

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26. What are the roles of each of the following groups of cells found in the testis?

(a) Sertoli Cells (1 mk)

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(b) Interstitial cells (1 mk)

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27. (a) What is metamorphosis? (1 mk)

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(b) What is the significance of metamorphosis in insects. (2 mks)

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28. State two main ways in which unicellular organisms are able to excrete metabolic wastes. (2 mks)

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29. Distinguish between population and community. (2 mks)

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30. Give two reasons for the development of lateral branches after removal of apical bud. (2 mks)

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31. Name a disease caused by lack of thyroxine hormone. (1 mk)

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32. Name any two bones of the pelvic girdle in a human being. (2 mks)

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