
**KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS**

**MARANDA SCHOOL HIGH SCHOOL
BIOLOGY THEORY
PAPER 1**

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**MARANDA SCHOOL KCSE TRIAL
AND PRACTICE EXAM 2016**

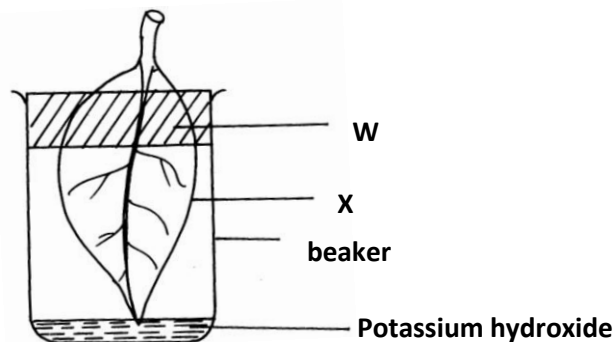
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BIOLOGY

PAPER 1

TIME: 2 HOURS

1. State the functions of each of the following cell organelles.
 - (a) Lysosomes
 - (b) Golgi apparatus
2. Give any **two** factors that hinder self-fertilization in flowering plants. (2marks)
3. The diagram below shows an experiment that was carried out to investigate photosynthesis on a leaf from a potted plant.



The plant was kept in the darkness for 48 hours before the experiment. The set-up was left in the light for several hours, and then the leaf was tested for starch.

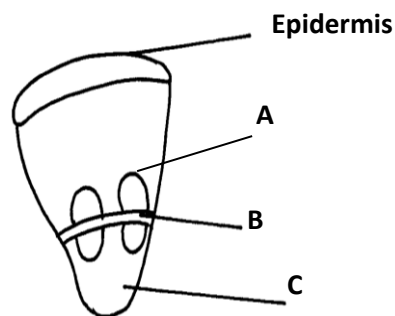
- (a) What results was expected in region: (2mks)
 - (b) State the role of potassium hydroxide in the experiment. (1mark)
4. (a) What is sex-linkage. (1marks)
 - (b) Name **two** sex linked traits in humans. (2marks)
5. Give **three** ways in which red blood cells are adapted to carrying out their function. (3marks)
 6. Explain the importance of each of the following during the process of digestion in human beings.
 - (a) Bile (1mk)
 - (b) Saliva (2mks)
 7. What changes would occur to a marine amoeba species if it was transferred into a fresh water pond? (2mks)
 8. Distinguish between analogous and homologous structures. (2marks)
 9. (a) State **one** function of cilia in organisms. (1mark)
 - (b) Name **two** parts of the human body which have cilia. (2marks)
10. John and Paul, who are siblings, are both normal and so are their parents, but they have a haemophilic brother. Give a genotype of their parents. (2marks)
 11. The diagram below represents the mature fruit of a certain plant.



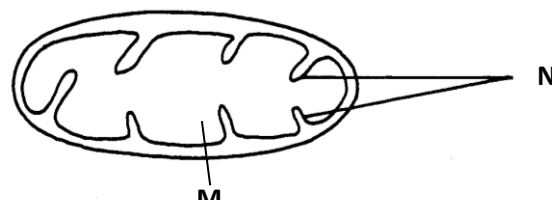
- (a) State the agent of dispersal for the fruit. (1mark)
- (b) Give **one** reason for your answer in (a). (1mark)
- (c) State **one** advantage of fruit and seed dispersal. (1mark)
12. In the experiment, it was observed that when maggots are exposed to light, they move to dark areas, while *Euglena* and *Chlamydomonas* move towards the light.
- (a) Name the type of response exhibited by:
- (i) Maggots (1mark)
- (ii) *Euglena* and *Chlamydomonas* (1mark)
- (b) State the importance of the response shown by:
- (i) Maggots (1mark)
- (ii) *Euglena* and *Chlamydomonas* (1mark)
13. (a) Name the hormone responsible for apical dominance in plants. (1mark)
- (b) Aldosterone is a hormone involved in homeostasis.
- (i) Name the gland that produces aldosterone. (1mark)
- (ii)) State the function of aldosterone. (1mark)
14. (a) Name the process by which urea is formed in the liver. (1mark)
- (b) Explain the importance of excreting urea from the body. (1mark)
- (c) Young growing children excrete less nitrogen compared to what they consumed. (1mark)

Explain.

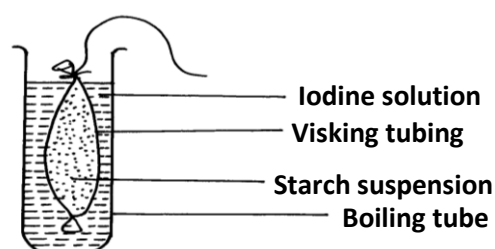
15. The diagram below shows a section of a dicotyledonous stem.



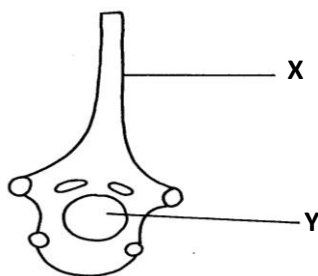
- (a) Name the parts marked: (2mark)
- (b) State the function of the part marked **B**. (1mark)
16. Study the diagram of a cell organelle shown below and answer the questions that follow.
- (a) Name the parts labelled **M** and **N**.



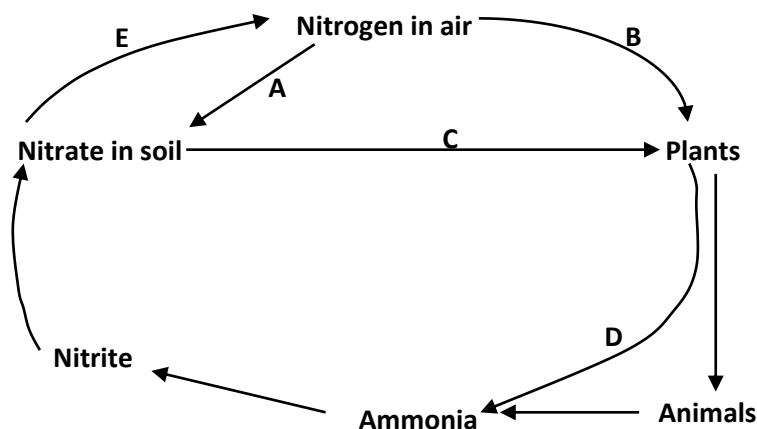
- (b) State the function of the organelle. (1mark)
17. Study the diagram below.



- (a) What colour is expected in the visking tubing and iodine solution after sometime?
- (i) In visking tubing. (1mark)
- (ii) Iodine solution (1mark)
- (b) Explain the observation in iodine solution. (1mark)
18. Name **three** support tissues in higher plants. (3marks)
19. What is the function of aerenchyma tissue in hydrophytic plants? (2mark)
20. How is the alveolus of a mammal adapted for gaseous exchange? (3marks)
21. (a) Name the organisms that cause the following diseases.
- (i) Malaria (1mark)
- (ii) Cholera (1mark)
- (b) State **one** way of controlling schistosomiasis (bilharzia)
22. What is the importance of:
- (i) Primary growth (1mark)
- (ii) Secondary growth (1mark)
23. State **three** adaptations of sperm to its function. (3marks)
24. What is the importance of the following in plant nutrition.
- (a) Root hairs (1mark)
- (b) Stomata (1mark)
- (c) Xylem (1mark)
25. The diagram below represents the structure of a mammalian vertebra.



- (a) Identify the vertebra. (1mark)
- (b) Name the parts labelled X and Y.
26. The figure below represents the cycling of nitrogen in nature.



- (a) Name the process represented by letters (3marks)
- (b) Name the organisms responsible for process B. (1mark)
27. What are the economic importance of organisms in kingdom fungi. (3marks)
28. State **three** evidences that support the theory of evolution. (3marks)