

# KAPSABET HIGH SCHOOL



## POST MOCK 2024



## BIOLOGY

231/1 (THEORY)

PAPER 1

TIME: 2 HOURS

NAME..... SIGN.....

INDEX NO..... ADM NO.....

### *Kenya Certificate of Secondary Education.*

#### Instructions to Candidates

- a) Write your name, class and admission number in the space provided above.*
- b) Write the date of the examination and sign in the space provided above.*
- c) Answer **all** the questions in the spaces provided.*
- d) You may be penalized for wrong spelling especially technical terms.*

#### For Examiner's Use Only

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1-33	80	

Answer **all** the questions in the spaces provided

1. Name the part of a flower that develops into:

[i] Seed

[1 mark]

.....

[ii] Fruit

[1 mark]

.....

2. State **two** ways in which floating leaves of aquatic plants are adapted to gaseous exchange.

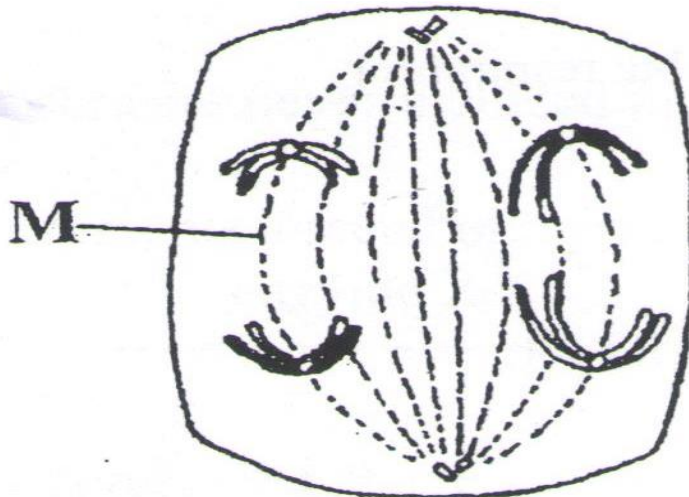
[2 marks]

.....

.....

.....

3. The diagram below represents a stage during cell division



[a] [i] Identify the stage of cell division

[1 mark]

.....

[ii] Give **two** reasons for your answer in [a] [i] above

[2 marks]

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**[b]** Name the structure labeled M

**[1 mark]**

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**4. [a]** Distinguish between the terms

**[2 marks]**

Homodont and heterodont

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**[b]** What is the function of the carnassial teeth

**[2 marks]**

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**5.** A patient with blood group A was involved in a road accident and required urgent blood transfusion. His relatives were invited to donate blood.

**[a]** Name the compatible blood groups

**[2 marks]**

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.....

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**[b]** State why other blood groups were not compatible

**[2 marks]**

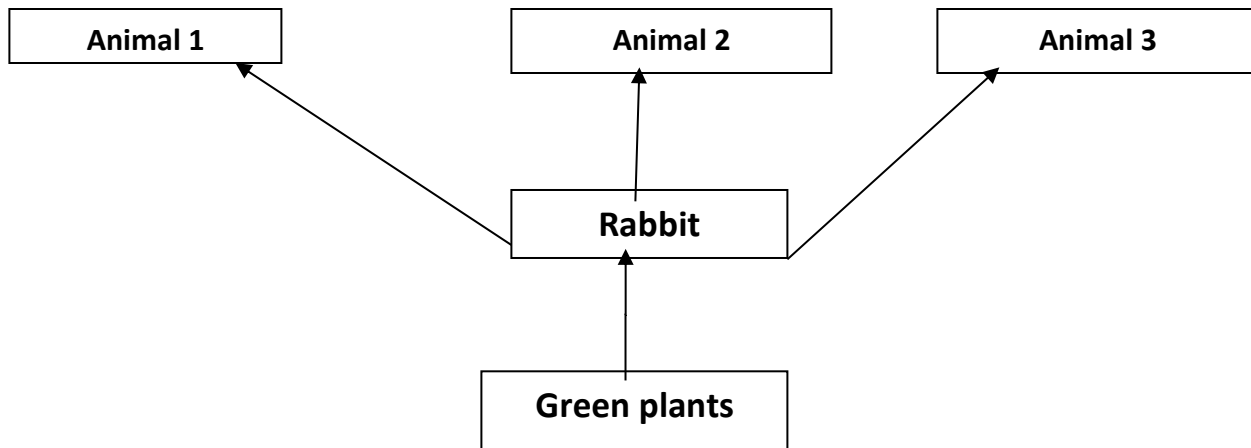
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6. The flow chart shows a part of a food relationship in an ecosystem



[a] [i] Name the food relationship shown

[1 mark]

.....

[ii] How many trophic levels are shown in the diagram

[1 mark]

.....

.....

[b] What is the main source of energy in the ecosystem

[1 mark]

.....

7. Name the only epidermal cell in plants that contain chloroplast

[1 mark]

.....

8. The equation below represents a metabolic process that occurs in the mammalian lives



[a] Name the process that represents the above equation

[1 mark]

.....

[b] Identify the enzyme represented by X

[1 mark]

.....

[c] What is the importance of the process to the mammal [1 mark]

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9. [a] Name the carbohydrate that is stored in mammalian muscle [1 mark]

.....

[b] What name is used to describe removal of indigestible and undigested food material from the alimentary canal [1 mark]

.....

10. [a] Carl Linnaeus developed the taxonomic units of classification

[i] What is taxonomy [1mark]

.....

.....

[ii] Why was the system of classification by Carl Linnaeus described as natural system of classification [2 marks]

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11. Phagocytes also called granulocytes or polymorphs are cells found in the blood that ingest pathogens and cell debris

[i] Why are they called polymorphs. [1 mark]

.....

.....

[ii] Name the cell organelle most abundant in phagocytes that enable them function effectively. [1 mark]

.....

12. Name the:

[a] Material that strengthens xylem tissue

[1 mark]

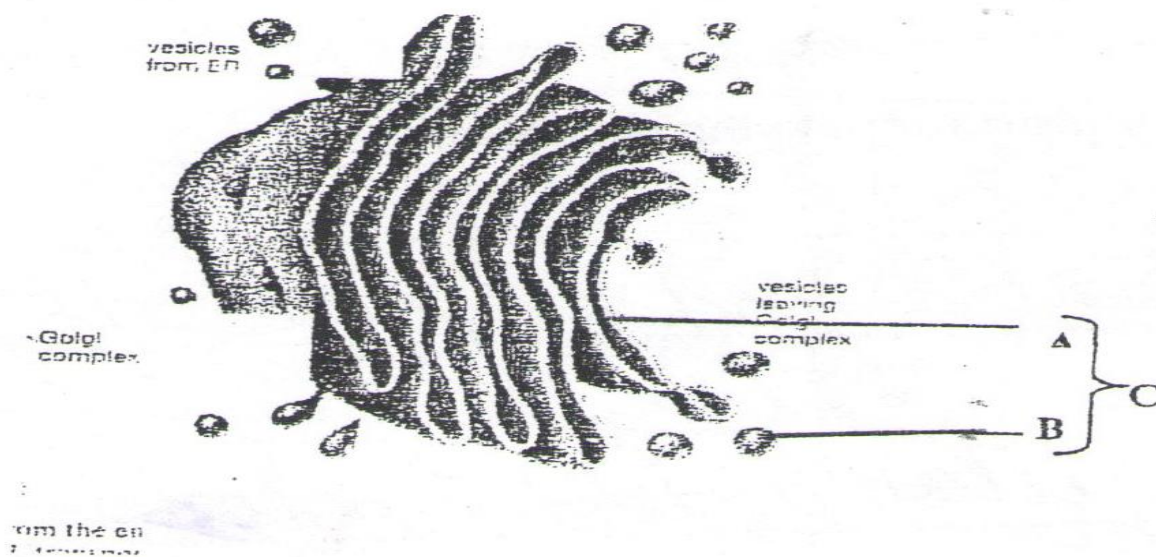
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[b] Tissue that is removed when the part of a plant is ringed

[1 mark]

.....

13. The diagram below represents a cell organelle.



[i] State the function of this organelle

[1 mark]

.....

.....

[ii] Name each of the parts A and B

A ..... [1 mark]

B ..... [1 mark]

14. In which two ways do guard cells differ from other epidermal cells

[2 marks]

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**15. [a]** Through cellular respiration, the chemical energy stored in glucose molecule is converted into which specific molecule **[3 marks]**

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**[b]** Name the substance that speed up biochemical reaction **[1 mark]**

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**16.** During germination and early growth, the dry weight of endosperm decreases while that of embryo increase explain. **[2 marks]**

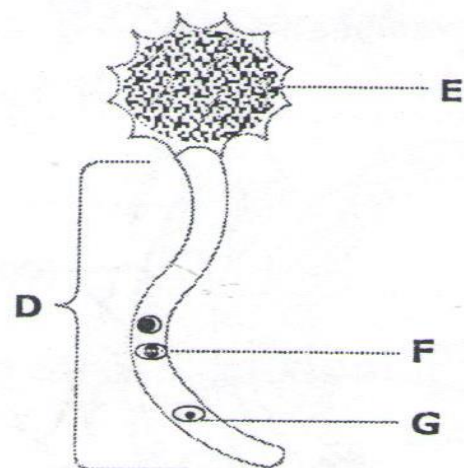
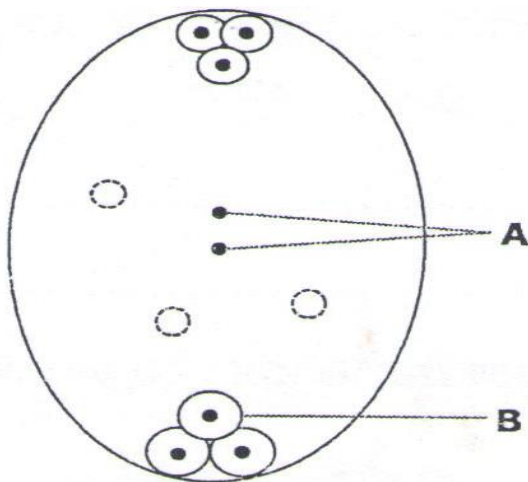
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**17.** The diagrams below show changes in the life cycle of flowering plants.



**[i]** Complete the table below by choosing the letters from the diagram which refers to each of the stages given. **[4 marks]**

STAGE OF LIFE CYCLE	LETTER
Male gametophyte	
Tube nucleus	
Female gamete	
Male gamete	

**18.** State **two** characteristics of kingdom Monera that are not found in other kingdoms. **[2 marks]**

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**19.** State **three** ways by which plants compensate for lack of the ability to move from one place to another. **[3 marks]**

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**20.** State **three** physiological processes that are involved in movements of substances across the cell membrane. **[3 marks]**

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**21.** If the human pancreas is not functional:

**[a]** Name the hormone which will be deficient.

**[1 mark]**

.....



[b] Name the disease the human is likely to suffer from.

[1 mark]

22. The oxidation state of a certain food is represented below by a chemical equation.



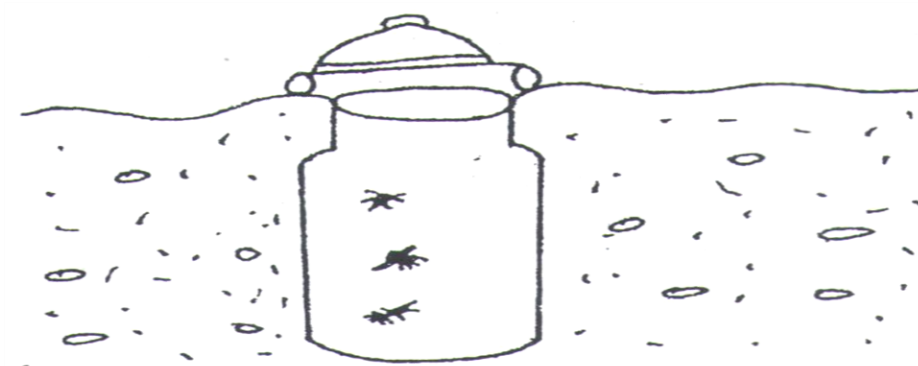
[a] Calculate the respiratory quotients [RQ] of the food substance.

[2 marks]

[b] Identify the food substrate

[1 mark]

23. The diagram below shows an apparatus used during collection of specimen.



[a] Identify the apparatus

[1 mark]

[b] What is the use of the apparatus named above

[1 mark]

24. State **two** physical factors in an ecosystem that affect the distribution of organisms. [2 marks]

25. A DNA strand has the following base sequence **G C C T A G A T C A C**.

What is the sequence of the

[i] Complementary DNA strand [1 mark]

.....

[ii] M-RNA strand copied from this DNA strand . [1 mark]

.....

26. State **three** limitations of fossil records as evidence of organic evolution [3 marks]

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27. Explain the term “**Resistance**” as used in evolution of living organisms [2 marks]

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28.State the function of the following parts of a light microscope .

[ i] Body tube [1 mark]

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.....

[ii] Diaphragm [1 mark]

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29. The table below shows analogies of gene mutations.

[3 marks]

	Intended message	Actual message
A	Buy me a skirt	Buy me a shirt
B	This is my team	This is my mate
C	Auntie is staying	Auntie is straying

Identify the type of gene mutation illustrated

**A** .....

**B**.....

**C** .....

30. State **two** sources of variations.

[2 marks]

.....  
.....

31. Name the diseases caused by each of the following

[2 marks]

(a) *Plasmodium falciparum*

.....

(b) *Entamoeba histolytica*

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