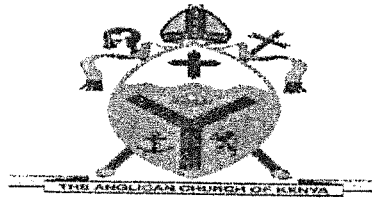


NAME.....INDEXNO.....ADM NO.....

SCHOOL.....SIGN.....DATE.....



ACK MASENO WEST JOINT EXAMINATION
KENYA CERTIFICATE OF SECONDARY EDUCATION

231/1
BIOLOGY
Paper 1
(Theory)

March/April 2025
TIME: 2Hours

INSTRUCTIONS TO CANDIDATE!

- ✓ Write your **name** and **admission number** in the spaces provided at the top of this page.
- ✓ Sign and write the date of examination in the spaces provided above.
- ✓ This paper consist of a single section.
- ✓ Answer all questions in the spaces provided.

For Examiners Use Only

QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
1 -30	80	
TOTAL SCORE		

1. Name the branch of biology that deals with the study of :-

(i) Hawks, eagles, parrots..... (1mark)

(ii) Bees, ants, termites..... (1mark)

2. (a) State **two** ways by which the skin prevents entry of micro-organisms into the body.(2marks)

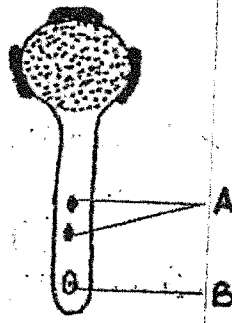
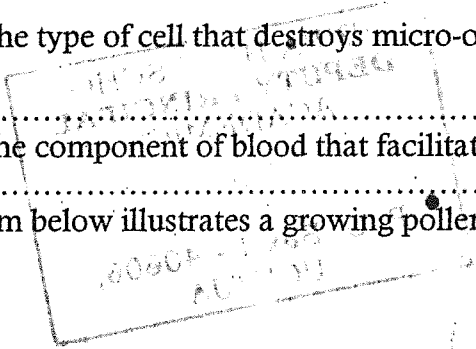
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(b) Name the type of cell that destroys micro-organisms in the human body. (1marks)

.....

(c) Name the component of blood that facilitates conversion of fibrogen to fibrin. (1mark).....

3. The diagram below illustrates a growing pollen tube.



(a) Name the part labeled B (1mark)

(b) Explain the role of the part labelled A (2marks)

.....
.....
.....

4. Distinguish between monoecious plant and dioecious plant. (2marks)

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.....

5. Explain the term positive feedback mechanism as used in homeostasis. (1mark)

.....
.....

6. Define the following terms as used in cell physiology

(a) Haemolysis

(1mark)

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.....

(b) Flaccid cell

(1mark)

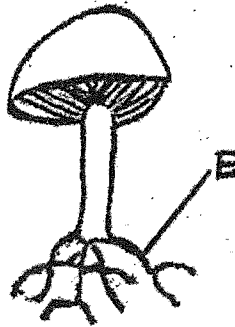
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7. The diagram below shows an organism in a certain kingdom.

(a) Name the Kingdom to which the organism belongs (1mark)

(b) State the mode of nutrition for the organism. (1mark)

.....



.....
(c) Name the part labelled E and state its function.

Part..... (1mark)

Function..... (1mark)

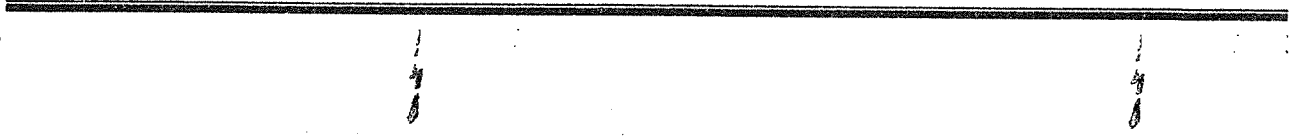
8. Explain why most athletes prefer training from high altitude areas (3marks)

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9. In an experiment, a mouse was observed to have inhaled 200cm^3 of oxygen and exhaled 199.75cm^3 of carbon (IV) oxide in ten minutes.

(a) Calculate the respiratory quotient for the activity. (2marks)

.....
.....
.....



(b) Identify the possible food substance consumed by the mouse (1 mark)

.....

.....

(c) State the fate of excess food consumed in (b) above in the human body (1 mark)

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10. Name two substances that would be used in hydrolysis of disaccharides in body tissues. (2 marks)

.....

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11. In an experiment a group of students set up the apparatus below in the laboratory and made observations after 72 hours.

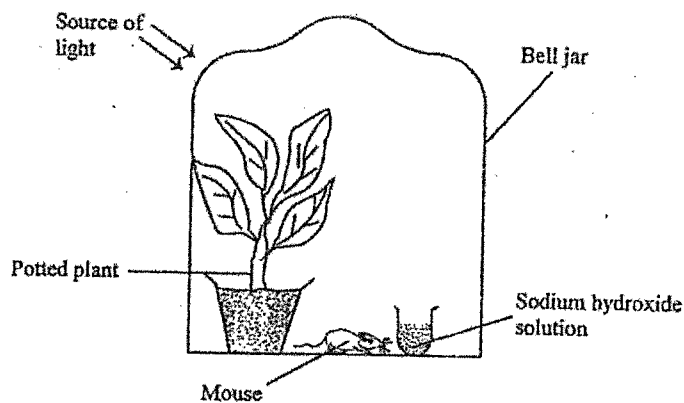
(a) Explain how inclusion of sodium hydroxide solution would affect the mouse in the experiment. (3 marks)

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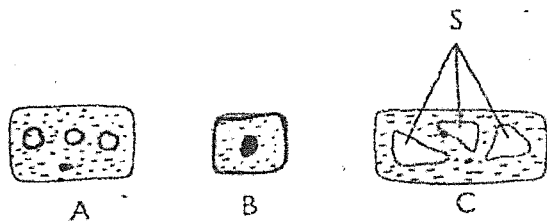


(b) State why the students preferred to use a bell jar and not a tin box in the experiment. (1 mark)

.....

.....

12. Below are cells found at different zones in a shoot tip.



(a) Name the zone in which cell A is found (1mark)

(b) State **two** characteristics of cells in the zone from where B was obtained (2marks)

(c) The preceding zone does not have a representative cell. Identify the zone. (1mark)

13. State **one** use for each of the following apparatus in the study of living organisms.

(i) Bait trap..... (1mark)

(ii) Specimen bottle..... (1mark)

14. A student observed an organelle using an electron microscope of magnification X800. Its diameter was 2 millimeters. Calculate the actual diameter of the organelle in micrometers.

(3marks)

15. (a) Distinguish between diffusion and active transport (2marks)

(b) A group of form one students, while investigating on the process of osmosis were advised to use the tissues from fresh raw potato rather than the boiled potato tissue. Explain. (2marks)

16. Name a disease caused by lack of each of the following in human beings.

(i) Vitamin C..... (1mark)

(ii) Iodine..... (1mark)

17. State **two** ways by which lactic acid formed in the muscles of an athlete is removed. (2marks)

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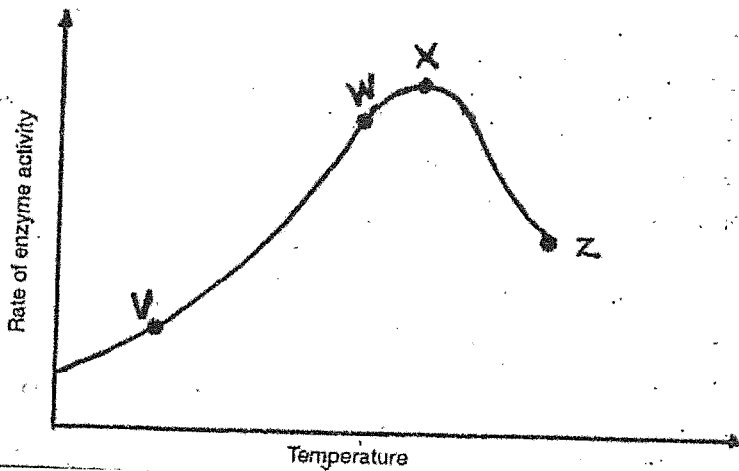
18. What are the advantage of desert animals excreting their nitrogenous waste in form of urea and not ammonia? (2marks)

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.....

19. Explain why a bat is classified as a mammal yet it flies. (2marks)

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20. The graph below shows the rate of enzyme action in relation to changes in temperature. Account for the observations in each case for the rate of enzyme action.



(i) Between V and W (1mark)

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.....

(ii) At X (1mark)

.....
.....

21. A grade six pupil observed a bird laying eggs that hatched into chicks. State any two characteristics of living things displayed. (2marks)

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22. Define the term Binomial Nomenclature (2marks)

.....
.....

23. (a) Why are there no carrier males in haemophilic condition? (1mark)

.....
.....

(b) What is polyploidy? (1mark)

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.....

24. (a) Identify major photosynthetic cells in the leaves of terrestrial plants (1mark)

.....
.....

(b) Identify the location of the cells (1mark)

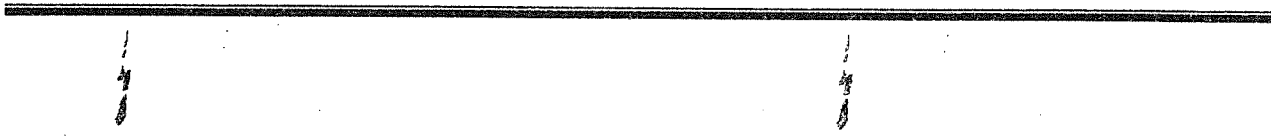
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25. (a) State the composition of an ecosystem. (2marks)

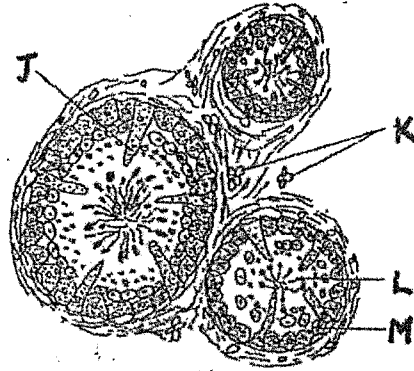
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(b) Explain why an ecosystem is said to be self-sustaining (2marks)

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.....



26. A cross section of the epididymis of a human male reveals the following details.



(a) Name the part labelled J (1 mark)

.....

(b) State the function of the part labelled K (1 mark)

.....

(c) Cell M is a diploid cell from which structure L is formed.

(i) By what type of cell division does structure L arise from cell M (1 mark)

.....

(ii) State the number of chromosomes in L (1 mark)

27. (a) What is natural selection? (1 mark)

.....

(b) What are the advantages of natural selection? (2 marks)

.....

28. Name fully the responses described below:-

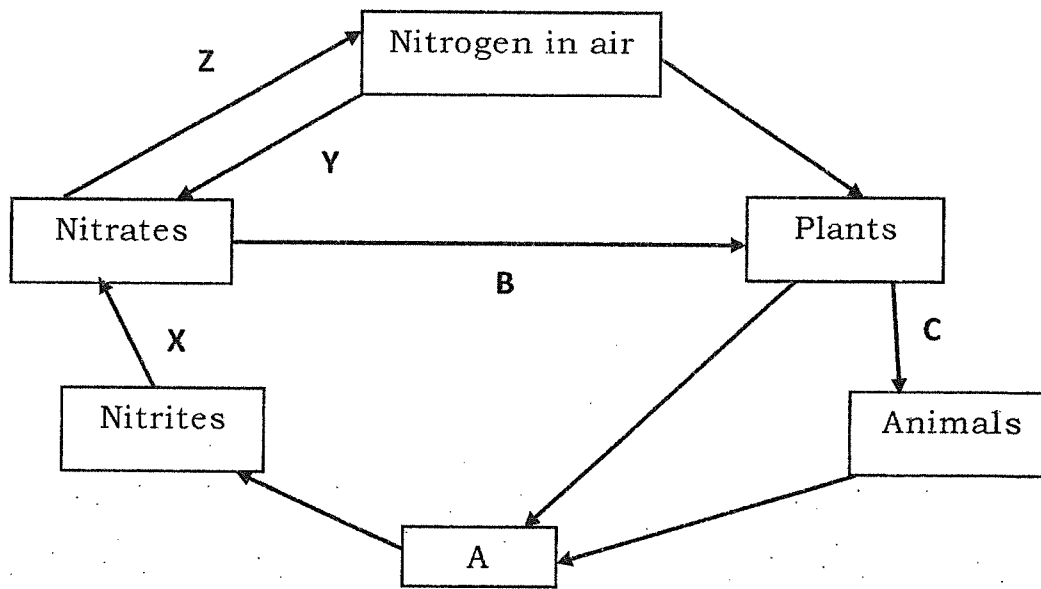
(a) Euglena swims towards water surface (1 mark)

.....

(b) A mosquito flies away from an insect repellent (1 mark)

.....

29. Below is a simplified drawing of the nitrogen cycle



(a) Identify the compound A.

(1mark)

(b) Name the processes labelled B, X and Y

(3marks)

B:

X:

Y:

30. State the units that constitute a nucleotide portion in a DNA strand.

(1mark)

.....
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NAME.....INDEXNO.....ADM NO

SCHOOL.....SIGN.....DATE..



ACK MASENO WEST JOINT EXAMINATION
KENYA CERTIFICATE OF SECONDARY EDUCATION

443/2

AGRICULTURE

PAPER 2

Instructions to candidates

- a) Write your name and index number in the spaces provided above
- b) Sign and write the date of examination in the spaces provided above.
- c) This paper consists of three sections; A, B and C
- d) Answer all the questions in section A and B
- e) Answer any two questions in section C
- f) All answers should be written in the spaces provided.
- g) Answer all questions in English
- h) Involvement in any examination irregularity will lead to disciplinary action

For Examiner's Use only

Section	Question	Maximum Score	Candidate's Score
A	1-15	30	
B	16-19	20	
C		20	
		20	
	Total Score	90	

SECTION A (30 MKS)

Answer all questions in this section

1. State four ways of controlling stress in poultry. (2mks)

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.....

2. Give four precautions taken when using workshop tools and equipment. (2mks)

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3. State four reasons for inbreeding in livestock. (2mks)

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4. Differentiate between flock mating and hand/ pen mating. (2mk)

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5. List four preventive measures for livestock diseases. (2mks)

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6. List four materials collected by bees. (2mks)

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7. State four maintenance practices on a feed trough. (2mks)

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8. Give four reasons why tilapia fish is common in Kenyan lakes and rivers. (2mks)

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9. List four components of high-quality milk. (2mks)

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10. State four advantages of using metal/ steel as construction material. (2mks)

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11. Give two reasons for using litter in a poultry house. (2mks)

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12. Give four desirable qualities of a livestock ration. (2mks)

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13. Outline four harmful effects of internal parasites in livestock. (2mks)

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14. State four disadvantages of fold system in poultry rearing. (2mks)



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15. Name the diary cattle breed with the following characteristics:

a) White with few black marks or black with few white marks but the tail switch and the leg parts below the knees are white. (1/2mk)

.....

b) Dark brown in colour with white marks. (1/2mk)

.....

c) Brown in colour with white marks on the face, parts of the legs below the knees, tail switch and flanks. (1/2mk)

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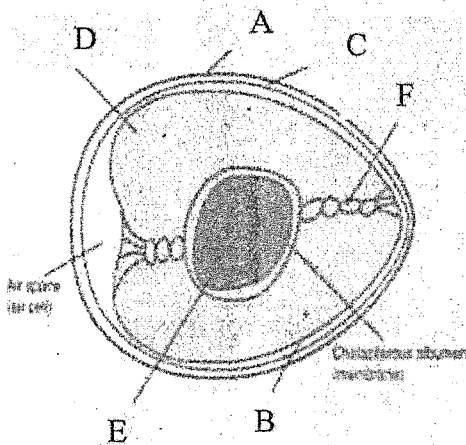
d) Brown in colour with black protruding eyes and black tail switch and muzzle. (1/2mk)



SECTION B (20 MKS)

Answer all questions in this section

16. The diagram below is an illustration of an egg. Study it carefully and answer the questions that follow.



a) Name the parts labelled B and F. (2mks)

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.....

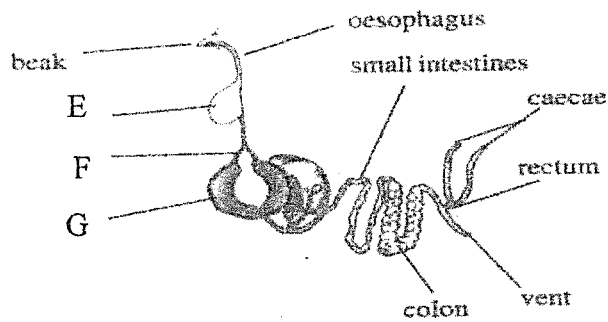
b) State two qualities of the part labelled A that should be considered when selecting eggs for incubation. (2mks)

.....
.....

c) What is the function of the part labelled E in a fertilized egg? (1mk)

.....

17. The illustration below represents the digestive system of poultry. Study it and answer the questions that follow.



a) Name the parts labeled E and F. (2mks)

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.....

b) State two ways in which part labeled G is adapted to its functions. (2mks)

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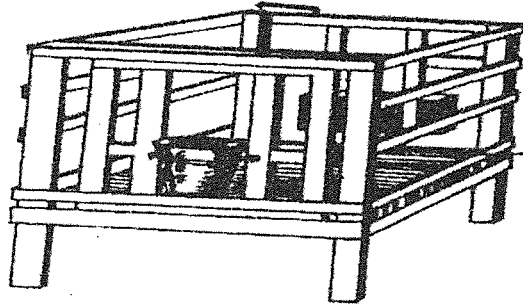
c) Give the function of the caecum in digestion in poultry. (1mk)

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18. The diagram below represents a calf pen. Study the diagram below and answer the questions that follow.



a) Identify the type of floor. (1mk)

.....

b) How high should the floor be raised above the ground level? (1mk)

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c) Give one reason for having the floor of the calf pen raised. (1mk)

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d) State four factors that should be considered in siting the calf pen. (2mks)

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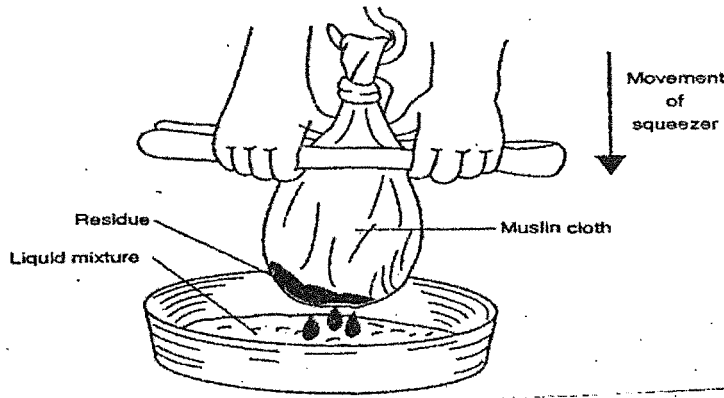
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19. The diagram below illustrates a method of processing honey. Study it and answer the questions that follow.



a) Identify the method illustrated above. (1mk)

.....

b) Apart from the method identified above, give two other methods of processing honey. (2mks)

.....

.....

c) State two uses of processed wax. (2mks)

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SECTION C (40 MKS)

Answer only two questions from this question

20.a Discuss coccidiosis under the following subheadings:

i. Animal attacked. (3mks)

.....
.....
.....

ii. Symptoms. (4mks)

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.....

iii. Control measures. (3mks)

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b) Describe the uses of various parts of a plunge dip. (10mks)

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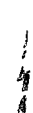
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21.a Describe ten signs of good health in livestock. (10mks)

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b) Describe **ten** deficiency symptoms of minerals in livestock. (10mks)

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21.a Describe ^{factors to consider when selecting a breeding stock} ten signs of good health in livestock. (10mks)

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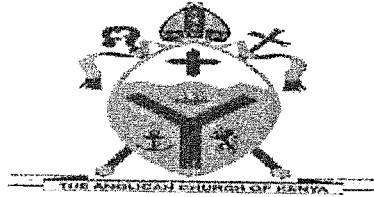
b) Describe ^{the tools used in the construction of Kenya top bar hives} ten deficiency symptoms of minerals in livestock. (10mks)

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NAME.....INDEXNO.....ADM NO.....

SCHOOL.....SIGN.....DATE.....



**ACK MASENO WEST JOINT EXAMINATION
KENYA CERTIFICATE OF SECONDARY EDUCATION**

March/April 2025

AGRICULTURE

PAPER 1

2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Write your name admission number and the name of your school in the spaces provided above.
2. Sign and write the date of examination in the spaces provide above.
3. This paper consist of three sections A, B and C.
4. Answer **all** the questions in section A and B and any **two** questions in section C.
5. All answers should be written in the spaces provided.
6. All answers must be written in English.
7. This paper consist of 11 printed pages.
8. Candidates must check to ascertain that all the pages are printed as indicated and that no question is missing.

FOR EXAMINER'S USE ONLY

SECTION	QUESTIONS	MAXIMUM SCORE	Candidate's score
A	1-15	30	
B	16 -19	20	
C	20-22	40	
Total score		90	

SECTION A (30 Marks)

Answer all the questions in this section in the spaces provided.

1. State **four** factors that influence the scale of agricultural production (2 marks)

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.....

2. State **four** effects of excessive nitrogenous fertiliser application on tomatoes. (2 marks)

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.....

3. Give **two** reasons for carrying out each of the following operations in land preparation:

(a) Rolling (1 mark)

.....
.....

(b) Leveling (1 mark)

.....
.....

4. List **four** methods of treating water for use on the farm. (2 marks)

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5. State **four** uses of labour utilisation analysis records (2 marks)

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6. Outline **four** activities that may be undertaken in organic farming. (2 marks)

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7. State **four** characteristics of a good site for a tomato nursery bed site. (2 marks)

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8. State **four** natural factors that may encourage soil erosion. (2 marks)

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9.(a) Define the term land reform. (1 mark)

.....

(b) State **four** benefits of a land registration certificate in farming. (2 marks)

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10: What is meant by each of the following in agroforestry. (3 marks)

(a) Pollarding

.....

(b) Coppicing

.....

(c) Lopping.

.....

11. Give **four** reasons why green manure is not commonly used in farming. (2 marks)

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12. Give **four** reasons why early defoliation is discouraged in pasture utilisation. (2 marks)

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13. State **four** farming activities that may pollute water. (2 marks)

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14. Give **four** factors that influence the number of secondary cultivations in seedbed preparation. (2 marks)

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15. State four functions of Agricultural Society of Kenya (A.S.K.). (2 marks)

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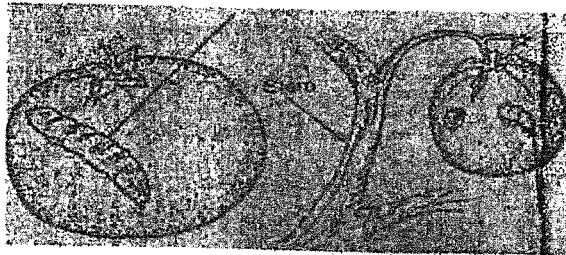
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SECTION B (20 Marks)

Answer all the questions in this section in the spaces provided.

16. The diagram below illustrate a tomato fruit infested by a field pest



(a) Identify the pest. (1 mark)

.....

(b) State two ways in which the pest is economically important. (2 marks)

.....

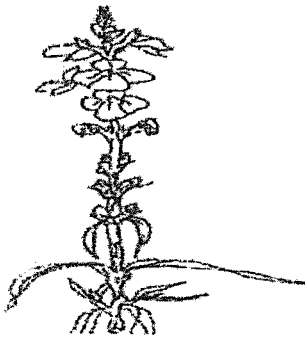
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(c) State two cultural ways of controlling the pest. (2 marks)

.....

.....

17. The diagram below illustrates a parasitic weed. Study the diagram carefully and answer the questions that follow.



(a) Identify the weed illustrated above. (1 mark)

.....

(b) Name **two** crops the weed illustrated above commonly attacks. (1 mark)

.....

.....

(c) State **one** reason why the weed is referred to as a parasite weed. (1 mark)

.....

(d) State **two** methods for controlling the weed illustrated above. (2 marks)

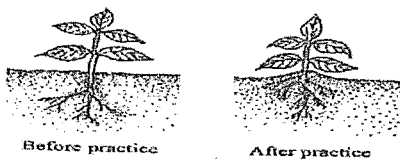
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18. The diagram below shows an illustration of a crop field practice.



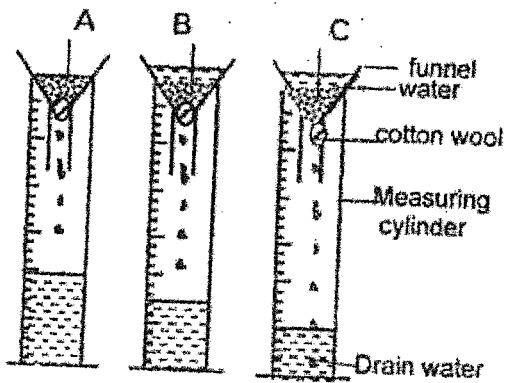
(a) Identify the field practice illustrated above. (1 mark)

.....

(b) Name **two** crops which require the practice illustrated. (2 marks)

.....
.....
(c) Give **two** reasons for carrying out the practice on one of the crops you have named in (b) above. (2 marks)

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.....
19. The diagram below illustrates an experiment on soil. Study it carefully and answer the questions that follow.



(a) State the aim of the experiment. (1 mark)

.....
(b) If the volume of water illustrated in the measuring cylinders was observed after one hour, identify the soil samples labelled A and B. (2 marks)

.....
(c) State two ways in which the soil structure of the soil sample labeled C above can be improved. (2 marks)

SECTION C (40 Marks)

Answer any two questions from this section in the spaces provided.

20. (a) Explain **seven** factors that should be considered when selecting seeds for planting.

(7 marks)

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(b). Describe Blossom End Rot disease in tomatoes under each of the following sub-headings:

(i) symptoms. (1 mark)

.....

(ii) causes. (3 marks)

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.....

.....

(iii) control measures. (3 marks)

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(c). Explain **six** reasons for practising crop rotation. (6 marks)

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21. (a). Explain the different ways in which each of the following environmental factors influence crop production

(i) Temperature. (5 marks)

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(ii) Wind. (4 marks)

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b). Explain five ways in which HIV/AIDS limits agricultural production. (5 marks)

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(c). State **six** reasons why a nursery is important in crop production. (6 marks)

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22.(a)(i). Describe the harvesting and marketing of bulb onions. (4 marks)

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ii) Explain **four** precautions that should be observed when harvesting cotton. (4 marks)

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(b). Describe the risks and uncertainties encountered by sugarcane farmers in Kenya. (8 marks)

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(c). Describe four methods used in water harvesting. (4 marks)

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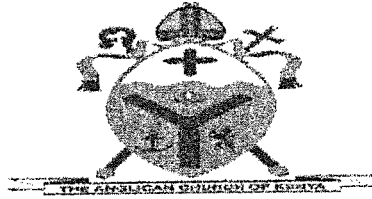
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NAME.....INDEXNO.....ADM NO.....

SCHOOL.....SIGN.....DATE.....



**ACK MASENO WEST JOINT EXAMINATION
KENYA CERTIFICATE OF SECONDARY EDUCATION**

565/1

BUSINESS STUDIES

PAPER 1

MARCH, 2025

DURATION ; 2 HOURS

TERM 1 – 2025

INSTRUCTIONS TO THE CANDIDATES

- a) Write your name and Admission Number in the spaces provided above.
- b) Sign and write the date of the examination in the spaces provided.
- c) This paper consists of 25 questions
- d) Answer ALL questions in the spaces provided.
- e) Candidate should answer the questions in English.

FOR EXAMINEER'S USE ONLY

QUESTION	1	2	3	4	5	6	7	8	9	10	11	12	B	14
MARKS														

QUESTION	15	16	17	18	19	20	21	22	23	24	25

TOTAL MARKS

1. State **four** ways in which economic environment may negatively affect the performance of a business. (4 mks)

- a).....
- b)
- c).....
- d).....

State any **four** circumstances under which a business would adopt cash with order (C.O) policy in payments.

- a).....
- b).....
- c).....
- d).....

3. Outline any **four** components of an efficient transport system. (4 mks)

- a).....
- b).....
- c).....
- d).....

4.The following items were recorded in the books of kodongo Enterprises.

	sh
Opening stock	14,000
Purchase	80,000
Sales	150,000
Return inwards	5,000
Return outwards	10,000
Closing stock	8,000

Required:

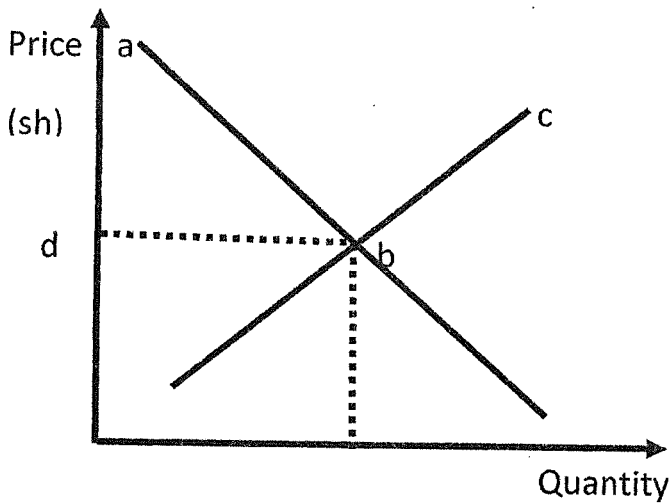
- a) Calculate the cost of goods sold (2 mks)

b) Determine margin percentage (3 mks)

5. Outline any **four** reasons why many Kenyans shy away from taking insurance cover (4mks)

- a).....
-
- b)
-
- c).....
-
- d).....
-

6. In the diagram below, name the parts labelled a, b, c and d (4 mks)



- a _____
- b _____
- c _____
- d _____

7. State any **four** reasons for government involvement in business activities (4mks)

- a).....
- b)
- c).....
- d).....

8. Identify any **four** rewards to labour as a factor of production (4mks)

- a).....
- b)
- c).....
- d).....

9. State **four** causes of unemployment in Kenya .(4 mks)

- a).....
- b)
- c).....
- d).....

10. Indicate in the spaces below the relevant factor of production associated with the following resources (4 mks)

RESOURCES	FACTOR OF PRODUCTION
a) Water	
b) Manager	
c) proprietor	
d) vehicles	

1. State any **four** characteristics of good money system (4mks)

- a).....
- b)
- c).....
- d).....

2. State any **four** situations that indicate the existence of a business opportunity. (4 mks)

- a).....
- b)
- c).....
- d).....

3. State any **four** accounting documents used in home trade. (4 mks)

- a).....
- b).....
- c).....
- d).....

14. State any **four** reasons why an increase in income per capital may not necessarily lead to an increase in standard of living.

- a).....
- b).....
- c).....
- d).....

15. State **four** monetary tools that can be used by the central Bank of Kenya to reduce the amount of money in circulation (4 mks)

- a).....
- b).....
- c).....
- d).....

6. the following is the credit side of a three column cash book.

Date	Details	A	B	C	D
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Name the column marked A, B, C and D

- A.
- B.
- C.
- D.

. State any **four** unethical issues in entrepreneurship (4 mks)

- a).....
- b)
- c).....
- d).....

18. In the table below, indicate the account to be debited and the account to be credited in each case.(4 mks)

TRANSACTION	A/C DEBITED	A/C CREDITED
a)withdraw sh 4,000 cash for personal use		
b)paid rent of sh 3,000 by cheque		
c)purchased goods worth sh 10,000 credit		
d)Deposited business cash to bank account		

19.State **four** roles of the Nairobi Stock Exchange market (4 mks)

- a).....
- b)
- c).....
- d).....

20.The following information was extracted from the books of maseno traders

Rate of stock turnover	3 times
Mark-up	20%
Opening stock	160,000
Closing stock	200,000

Required: calculate

a)Gross profit (2 mks)

b)Sales (2 mks)

21. Human wants have become increasingly difficult to satisfy, Outline any four reasons that can be undertaken by man to address that can be undertaken by man to address this challenge. (4 mks)

- a).....
- b)
- c).....
- d).....

22. Prepare Hekima Traders Trial balance at 30th april 2020 given the following items recorded. (5 mks)

Bank Overdraft	48,000
Debtors	26,500
Capital	102,000
Stock	84,000
Creditors	73,000
Discount allowed	28,000
Rent received	48,000
Mortgages	200,000
Land	236,500
Cash	96,000

23. State any **THREE** categories of public expenditure. (3 mks)

- a).....
- b)
- c).....

24. Outline any **four** trends in communication (4 mks)

- a).....
- b)
- c).....
- d).....

25. Identify the book of original entry where each of the following transactions maybe recorded .

TRANSACTIONS	BOOK OF ORIGINAL ENTRY
a) Bought goods on credit	
b) Sold an office on credit	
c) Some goods were returned back to the supplier	
d) Sold goods in cash	