
FORM 4 ENTRANCE EXAMS 2024

Name: Adm No.....

Candidate's sign

Class.....

AGRICULTURE 443/2

FEBRUARY 2023

TIME: 2 HOURS

Kenya Certificate of Secondary Education (K.C.S.E.)

Agriculture

Paper 2

INSTRUCTIONS TO CANDIDATES:

- Write your name and index number in the spaces provided above.
- Sign and write the date of examination in the spaces provided above.
- This paper consists of three sections A, B and C.
- Answer **all** the questions in section A and B.
- Answer any **two** questions in section C.
- All answers should be written in the spaces provided.
- This paper consists of 12 printed pages.
- Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.
- Candidates should answer all the questions in English.

For Examiner's Use Only:

SECTION	QUESTIONS	MAXIMUM SCORE	CANDIDATES SCORE
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A	1-18	30	
B	19-22	20	
C		20	
		20	
	TOTAL SCORE	90	

SECTION A (30 Marks)

Answer **ALL** the questions in this section.

1. Name **four** breeds of rabbits. (2marks)

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2. List **four** functions of the rumen in the digestion of feed in Ruminant animal (2marks)

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3. State **two** reasons why drenching is not an effective method of internal parasite control. (IMC) (1mark)

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4. Give the functional difference between a cross-cut saw and a rip saw. (1mark)

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5. State **two** functions of a queen in a colony (1mark)

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6. Give **two** reasons why rabbit hutches should be raised above the ground level.

(1mark)

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7. State **four** disadvantages of natural mating as a method of breeding in dairy cattle.

(2marks)

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8. Name **four** disorders in livestock caused by the lack of mineral nutrients.

(2marks)

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9. Name the type of hammer that one would require for the following operations.

(i) Striking cold chisel. (½ mark)

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(ii) Driving and removing nails in wood. (½ mark)

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(iii) Striking wooden chisels. (½ mark)

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(iv) Breaking stones for masonry work. (½ marks)

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10. State **four** ways in which animal utilizes a production ration. (2marks)

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11. State **four** observable features of an indigenous cattle (2marks)

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12. (a) Name **two** forms in which tapeworms are found in livestock (1mark)

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(b) State **four** non-chemical control measures of ticks on the farm (2marks)

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13. State **two** reasons why young rams should be docked (1mark)

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14. State **four** ways of restraining cattle during routine management (2marks)

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15. Give **four** features of housing that help to control livestock diseases. (2marks)

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16. State **two** functions of crop in the digestive system of chicken (1mark)

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17. Give **four** characteristics of a good site for fish pond (2marks)

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18. Give the meaning of the following terms used in livestock as used in livestock Production.

(1 ½ marks)

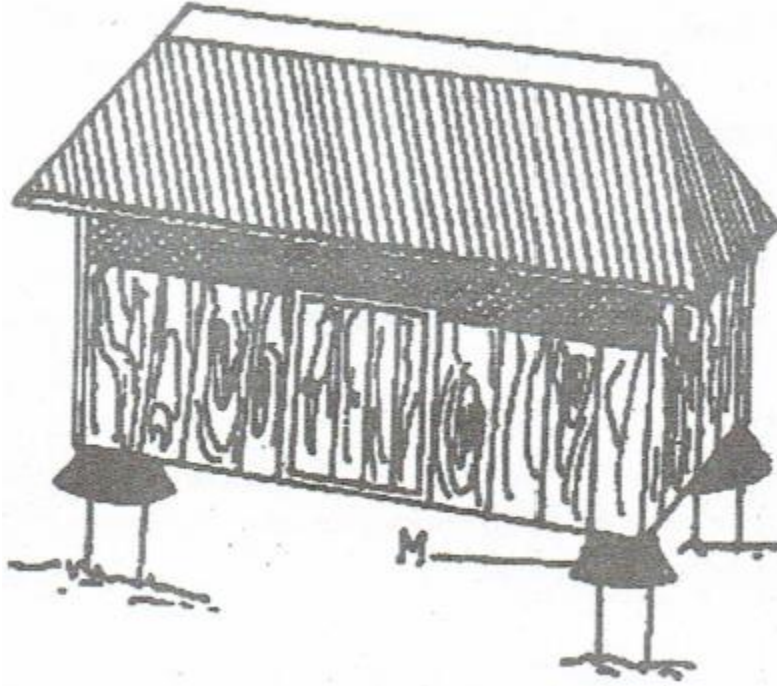
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SECTION B (20 Marks)

Answer ALL questions in this section in the spaces provided.

19. Below is a diagram of a farm structure for storing grains. Study it carefully and answer questions that follow



- (a) Identify the farm structure above (1mark)

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- (b) State the function of the part marked **M** (1mark)

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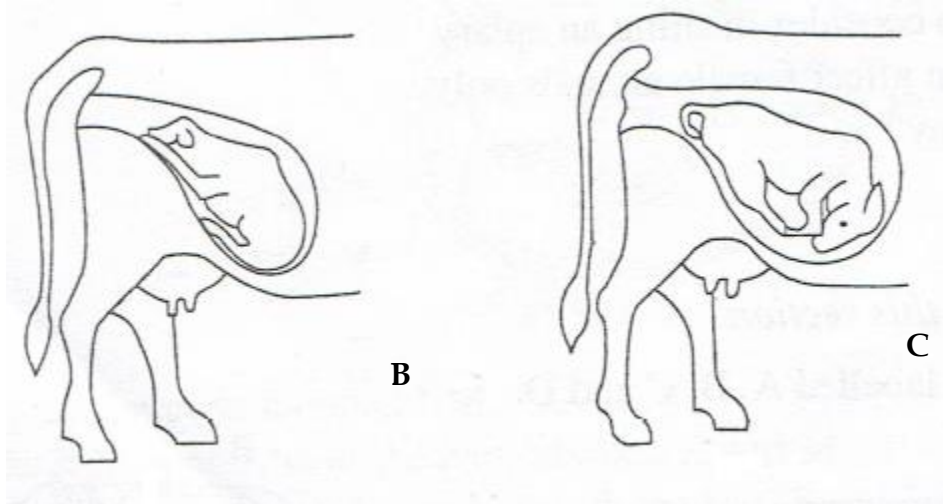
(c) Give **two** maintenance practical that should be carried out on the farm structure illustrated in readings for grain storage. (2marks)

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(d) A part from the structure illustrated above, name two other structures used to store grains by NCBP. (1mark)

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20. Study the illustration below and answer the questions that follow.



(a) Which diagram represent the normal presentation of calf at birth?

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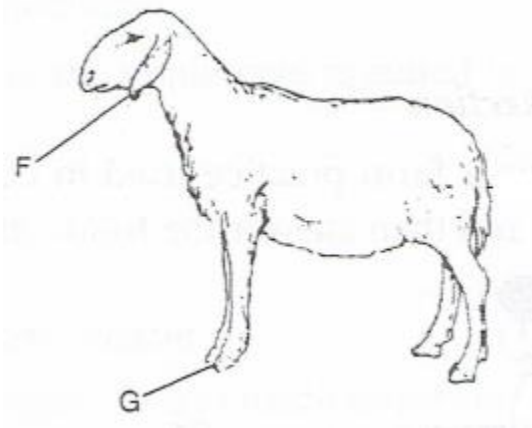
(b) What term is used to refer to position shown in diagram B?

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(c) State **three** signs of parturition in cattle (3marks)

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21. The illustration below represents a sheep with parts marked E, and G. study it and answer the questions that follow.



(a) (i) State the operation carried out on the parts labeled F and G.

F..... (1mark)

G.....(1mark)

(ii) Name the tool used to carry out the operation on the part G. (1 mark)

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(iii) Give **two** reasons for each operation carried out on the part labeled.

F..... (1mark)

G..... (1mark)

22. (a) A 300kg pig ration containing 20% crude protein was to be made from wheat bran (3% crude protein) and cotton seed cake (24% crude protein). Using the Pearson's square method, calculate the amount of each feed stuff that is needed to prepare the ration. (5marks)

SECTION C (40 Marks)

Answer any two questions in this section.

23. (a) Discuss **eight** general methods of disease control. (8marks)

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- (b) Describe the procedure of processing honey using heat method. (7marks)

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(c) Give **six** factors considered when selecting an helper for breeding.

(5marks)

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24. (a) Describe the life cycle of a two-host tick.

(5marks)

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(b) State **six** functions of water in an animal body.

(6marks)

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[illegible]

(c) Outline **five** importance of farm building. (5marks)

[illegible]

(d) Give **four** signs of heat in a doe. (4marks)

[illegible]

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[illegible]

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FORM 4 ENTRANCE EXAMS 2024

AGRICULTURE 443/2

MARKING SCHEME

SECTION A (30 MARKS)

Answer ALL the questions in this section.

1. Name four breeds of rabbits.

(2marks)

- Flemish giant
- New Zealand white / Kenya white
- Chinchilla
- Earlop

- Colifornia white
- Rex
- Angora

($\frac{1}{2} \times 4 = 2\text{mks}$)

2. List four functions of the rumen in the digestion of feed in

Ruminant animal

(2marks)

- Temporary storage of feed
- Action of microbial activities
- Synthesis of vitamin B complex
- Churns the food and mixes it with digestive enzymes.
- It absorb products of microbial digestion e.g volatile fatty acids and ammonia.

($\frac{1}{2} \times 4 = 2\text{mks}$)

3. State two reasons why drenching is not an effective method of internal parasite control. (IMC)

- It does not eradicate other stages of development.
- Does not destroy intermediate host
- It does not destroy parasites in pasture water and storage.

($\frac{1}{2} \times 2 = 1\text{mk}$)

4. Give the functional difference between a cross-cut saw and a rip saw (1mark)

- ❖ Cross cut saw a cross the wood grains while the rip saw cuts along the wood grain

(1x1 = 1 - mark as a whole)

5. State two functions of a queen in a colony (1mark)

- ✓ Lay eggs
- ✓ Keep the colony together by producing a hormone pheromones.

($\frac{1}{2} \times 2 = 1\text{mk}$)

6. Give two reasons why rabbit hutches should be raised above the ground level. (1mark)

- Hasten deifying of the buddy allow chopping
- Ensure security from attack by animals like dogs.
- Avoid attack by crawling insects e.g safari ants.

($\frac{1}{2} \times 2 = 1\text{mk}$)

7. State four disadvantages of natural mating as a method of breeding in dairy cattle. (2marks)

- It causes inbreeding / premature / uncontrolled breeding
- Risk of transmission of breed diseases
- Expensive / uneconomical to keep a bull
- Aggressive of heave bulb may cause physical injury to a cow on attendant.
- Only a limited number of cows can be mated by one bull within a given period of time.
- Expensive to transport bull from one area to another.

($\frac{1}{2} \times 4 = 2\text{mks}$)

8. Name four disorders in livestock caused by the lack of mineral nutrients (2marks)

- ✓ Milk fever
- ✓ Anaemia

- ✓ Goch
- ✓ Osteomalacia
- ✓ Bovine ketosis
- ✓ Canled toe paralysis
- ✓ Swayback / enzootic ataxia

($\frac{1}{2} \times 4 = 2\text{mks}$)

9. Name the type of hammer that would be used for the following operations
(2marks)

- (i) Striking cold chisels ($\frac{1}{2}$ mark)
 - Ball peen hammer
- (ii) Driving and removing chisels ($\frac{1}{2}$ mark)
 - Draw hammer
- (iii) striking wooden chisels ($\frac{1}{2}$ mark)
 - Mallet
- (iv) breaking stones for masonry work ($\frac{1}{2}$ mark)
 - sledge hammer

10. State four ways in which animal utilizes a production ration (2marks)

- For synthesis of products such as milk and fat for fattening
- For reproduction / mating
- For foetal development
- For growth in case of young animals
- For daily work activities like plough

($\frac{1}{2} \times 4 = 2\text{mks}$)

11. State four observable features of an indigenous cattle (2marks)

- Have hump
- Head is long and narrow
- Have loose skin prim folds
- Dewlap, umbilical fold brisket are extensively developed
- Baccine is high at the shoulder and pin bones and sloping down over the tail bud.
- Small rounded udder
- Long legs

($\frac{1}{2} \times 4 = 2\text{mks}$)

12. (a) Name two forms in which tapeworms are found in livestock (1mark)

- Embryo / infective lava
- Cysts / bladder worms/ cyslicercus larvae

($\frac{1}{2} \times 2 = 1\text{mk}$)

(b) State four non-chemical control measures of ticks on the farm (2marks)

- ❖ Hand – pickoy and killing
- ❖ Burning heavily infested pastures
- ❖ Ploughing heavily infested pastures
- ❖ Rotational grazing
- ❖ Double lenny of pasture land
- ❖ Use of birds to predate on ticks / biological
- ❖ Self-ticking to dislodge the ticks / natural

($\frac{1}{2} \times 4 = 2\text{mks}$)

13. State two reasons why young rams should be docked (1mark)

- ✓ Allow even distribution of the fat in the body

- ✓ To prevent accumulation of dirt this would encourage blowfly infestation.

($\frac{1}{2} \times 2 = 1\text{mk}$)

14. State four ways of restraining cattle during routine management (2marks)

- Use of hacters
- Use of leadstick and bullring
- Use of crash
- Use of head yoke

($\frac{1}{2} \times 4 = 2\text{mks}$)

15. Give four features of housing that help to control livestock diseases. (2marks)

- ❖ Well ventilated
- ❖ Well lie
- ❖ Free from draught
- ❖ Spacious
- ❖ Leak proof

($\frac{1}{2} \times 4 = 2\text{mks}$)

16. State two functions of crop in the digestive system of chicken (1mark)

- Softening / moistening of the food
- Storage of food temporary

($\frac{1}{2} \times 2 = 1\text{mk}$)

17. Give four characteristics of a good site for fish pond (2marks)

- Slope of land should be gentle sloping
- Reliable water source
- Free from cracks / anthills
- Soil should be free from gravels

- Preferable clay soils

($\frac{1}{2} \times 4 = 2\text{mks}$)

18. Give the meaning of the following terms used in livestock

Production.

($1\frac{1}{2}$ mark)

(a) Chick

- Newly hatched birds from one day to eight weeks

(b) Flushing

- Feeding of females with high quality feed 2-3 weeks before mating and 2-3 weeks after mating