

# MARKING SCHEME

| SECTION | QUESTION    | MAXIMUM SCORE | CANDIDATE SCORE |
|---------|-------------|---------------|-----------------|
| A       | 1-16        | 30            |                 |
| B       | 17-20       | 20            |                 |
| C       |             | 20            |                 |
|         |             | 20            |                 |
|         | TOTAL SCORE | 90            |                 |

## SECTION A: (30MARKS)

*Answer all questions from this section on the spaces provided.*

1(a) Give **two** qualities of milk of the Friesian breed of cattle. (1 mark)

- *Has low butter fat content of about 3.5%.*
- *Highest milk producing breed.*

b) Name **three** components of a truss. (1½ marks)

- *Tie or beam*
- *Two rafters*
- *Struts*
- *Rafter batter*

2. Give **two** reasons why Jersey breed of cattle is well suited to semi-arid conditions. (1 mark)
- *It has little pasture requirements.*
  - *An excellent grazer in poor pasture.*
- 3(a) State the effect of an incubator with internal humidity of 100%. (1/2 mark)
- *Lowers hatchability and leads to production of bigger chick which looks marshy.*
- b) State the use soluble grit to layer birds? (1/2 mark)
- *Encourage strong shelled eggs and efficient digestion.*
4. Give **two** uses of a wood float. (1 mark)
- *For plastering to create a level surface of floors and walls.*
5. Give **three** conditions may lead to culling of a breeding boar? (1 1/2 marks)
- *Poor health*
  - *Old age*
  - *Poor production*
  - *Have physical deformities*
  - *To avoid inbreeding*
  - *Have heredity defects*
6. Identify **two** practices carried out during sap displacement in timber preservation. (1 mark)
- *Fleshy cut posts are packed in containers filled with wood preservative. The preservative is drawn up through the wood grains as the sap dries out.*
- 7(a) State **three** characteristics of the Galla goat (1 1/2 marks)
- *Ability to adapt to hot conditions.*
  - *White coloured body.*
  - *Very good quality meat.*
- b) Name the **two** breeds of camels. (1 mark)
- *Dromedary*
  - *Bactrian*
- 8(a) List **three** sources of water to livestock. (1 1/2 marks)
- *Rivers, streams, dams*
  - *Springs, well, boreholes*
  - *Rain water*

- b) Maize germ, a livestock feed has a starch equivalent of 30%. Explain (1mark)
- *100kg of the feed will produce a net energy equivalent to the energy produce by 30kg of pure starch.*

9(a) State **four** ways in which fleas cause economic losses to the farmer. (2mark)

- *Cause irritation which leads to scratching.*
- *Stick fast fleas cause wounds on the point of attach.*
- *Lower quality*
- *Lower price*
- *Leads to mortality rates.*

b) List **three** limitations of water as a source of power in the farm. (1½ marks)

- *Most rivers are small and seasonal.*
- *It is expensive to harness the power.*
- *Most farms do not have access to large quantities of moving water.*

10. Tabulate **two** features that differentiate between dairy and beef cattle. (2 marks)

| <i>Dairy</i>                      | <i>Beef</i>                      |
|-----------------------------------|----------------------------------|
| <i>Wedge or triangular shaped</i> | <i>Blocky in shape</i>           |
| <i>Selective grazing</i>          | <i>Reduced selective grazing</i> |
| <i>Large udder</i>                | <i>Small udder</i>               |

11. Define the following terms as used in livestock production. (1½ marks)

- a) Digestibility
- *The portion of food retained in an animal's body after taking care of losses through urine, faces and gases, expressed as a percentage.*
- b) Prolificacy
- *Ability to give birth to many young once.*
- c) Malpresentation
- *Abnormal calving where the forelegs don't come out first.*

12. Give **three** methods of selecting livestock for breeding (1½marks)

- *Mass selection*
- *Progeny testing*
- *Contemporary comparison*

13. Why should bees be fed on sugar syrup?

(1mark)

- *When flowers are not available to maintain the colony.*

14. State **four** conditions that would encourage hens to eat eggs in poultry production

(1½mark) □

**Bright light**

- **Overcrowding**
- **Pests attack**
- **Lack of calcium minerals**

15. Distinguish between tugging and serving.  
(1mark)

- **Tugging – mating in sheep and goats.**
- **Serving – mating in cattle and pigs.**

16. What is the advantage of using forage harvesters compared to a mower?  
(1mark)

- **They are designed for harvesting and chopping forage materials to appropriate sizes.**

17. Give **three** maintenance practices of ox ploughs.  
(1½marks)

- **The land wheel bearing should be lubricated.**
- **Worn out shares be replaced.**
- **Blunt shares should be sharpened by hammering.**

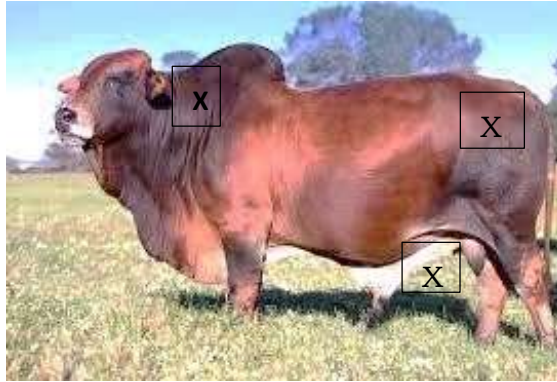
18. State **four** disadvantages of using live fence on the farm  
(2marks)

- **They take many years to grow.**
- **Can be hiding places for rodents and thieves.**
- **Require regular trimming.**

19(a) Give **two** predisposing factors of mastitis.  
(1mark)

- **Age**
- **Udder attachment**
- **Stage of lactation period.**
- **Incomplete milking**

b) Using letter **X** identify **three** areas infested with a three-host tick in the picture below.  
(1½marks)

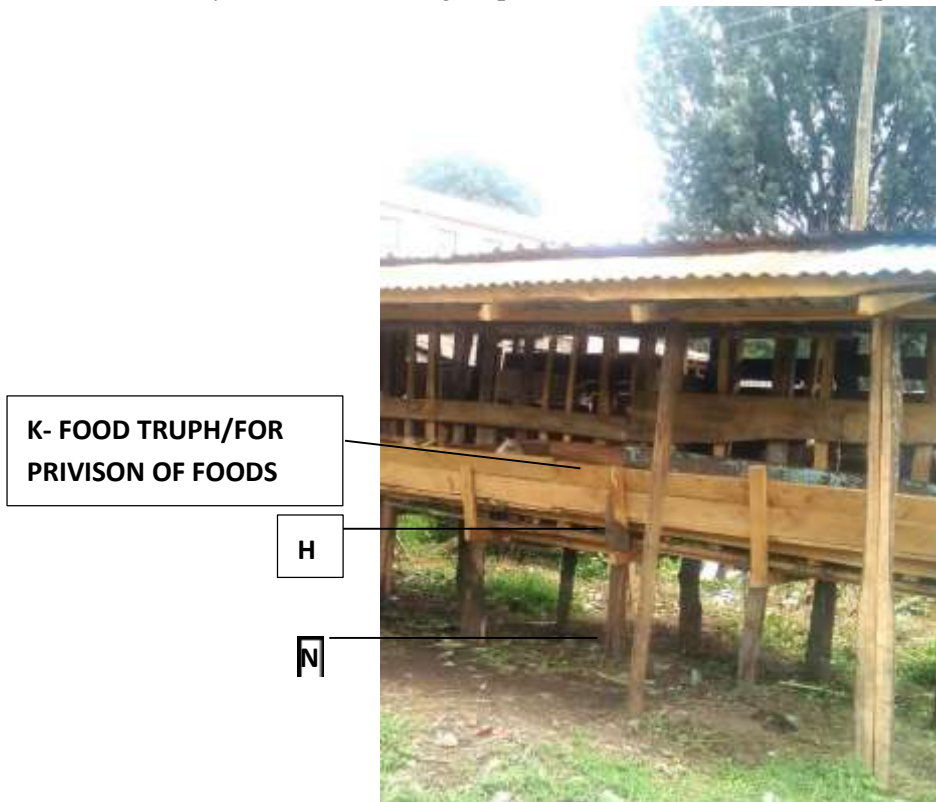


**SECTION**

**B: (20MARKS)**

***ANSWER ALL QUESTIONS FROM THIS SECTION ON SPACES PROVIDED***

20. Study the structure of a goat pen below and then answer the questions that follow.



**K- FOOD TRUPH/FOR PRIVISON OF FOODS**

**H**

**N**

a) Specify the measurements between **H** and **N**.  
(½mark)

- ***(N-H) – (60-90CM High)***

Give a reason for your answer in a) above.  
(½mark)

- ***Raised for proper drainage and easy cleaning.***

b) State the function of part **K**.  
(1mark)

- ***Used to place feed in***

- c) Which type of floor is recommended for the pen shown in the picture above  
(½mark)
- Slated floor

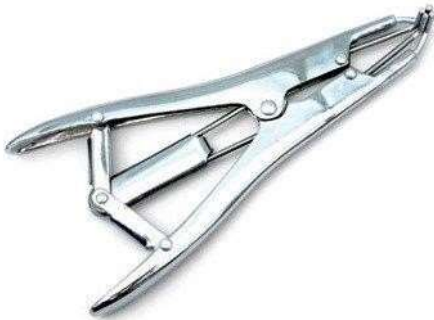
Give a reason for your answer in (c) above  
(½mark)

- *to facilitate passage of droppings and urine*
- d) List **two** reasons for housing the calves singly.  
(1mark)

□ *To prevent licking each other as this may form fur balls in the stomach*

21(a) Identify the equipment X and Y below.

(1mark)



**X -Burdizzo**

**Y -Elastrator**

- b) State the functions of each of the equipment.  
(2marks)

- X used for castrating bulls rams and billies**
- Y used to expand the rubber ring while docking castrating and dehorning**

- c) i) Name the tool used to castrate a piglet.  
(½mark)

- **Scalpel** ii) Give **two** reasons for castrating a male piglet.

(1mark)

- **To control inbreeding**
- **Fattens faster**
- **Controls breeding diseases**

22(a) Identify the parasites below.  
(1mark)



U

W

b) Name **two** species of parasite U.  
(1mark)

i. **Fasciola gigantica**

ii. **Fasciola hepatica**

c) Why is it difficult to control parasite U?  
(1mark)

- **It has an intermediate host**

d) State the livestock commonly affected by parasite W?  
(½mark)

- **Sheep**

e) A farmer wanted to mix 270kg of livestock feed containing 30% DCP by using Sorghum meal with 12% DCP and Soya bean meal containing 36% DCP. Calculate the quantities of each feedstuff he would have in the ration.  
(2marks)

Handwritten solution for question e):

12% Sorghum      36% Soya bean

6% parts of Sorghum.      18% parts of soyabean

30

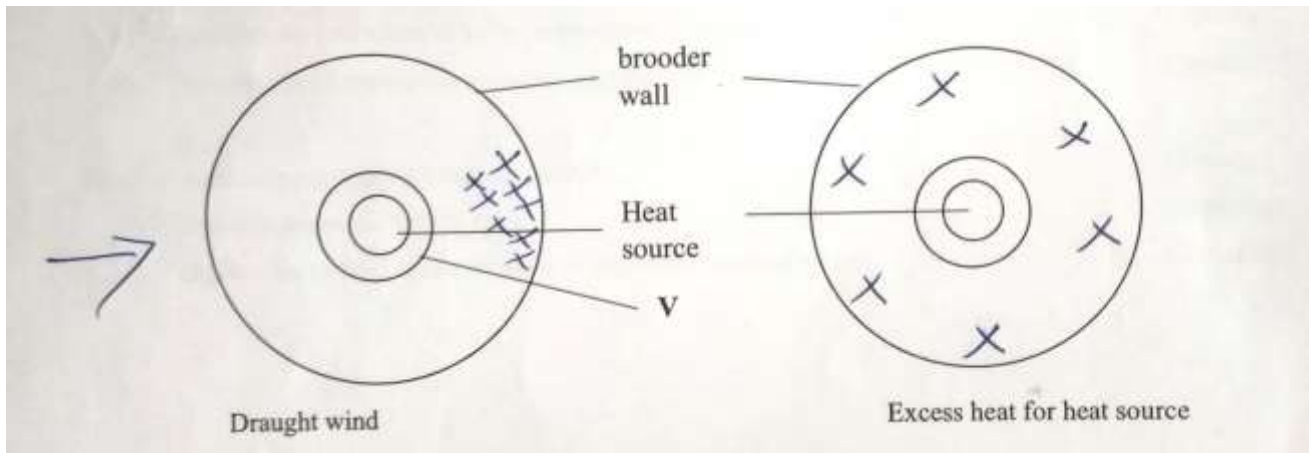
24

6/24 x 270kg = 67.5kg of Sorghum

18/24 x 270kg = 202.5kg of Soyabean.

(2marks)

23(a) Using *x* draw the behaviour of the chicks expected in the following conditions in a brooder.(2marks)



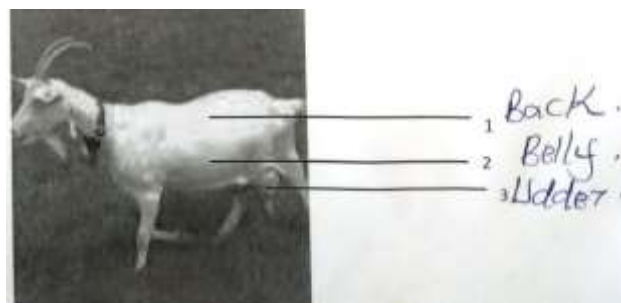
b) What is the role of the part labelled **V**? (½ mark)

- *to prevent the chicks from going to close to the heat source*

c) i) Identify the goat breed below. (1mark)

- *Saanen*

ii) On the diagram name parts 1-3. (1½ marks)





- d) List two features that are used to identify the goat breed (1mark)
- *White in colour*
  - *Upright ears and forward facing*

### SECTION C: (40MARKS)

**Answer ANY TWO questions from this section on foolscaps provided.**

- 24(a) Describe the procedure for honey harvesting in a Kenya Top Bar Hive. (5marks)

- *Honey is harvested early in the morning as late in the evening when bees are less active. When harvesting honey, the following steps are followed.*
- *Approach the hive quietly and blow smoke around the hive and later through the entrance holes using a smoker. The smoke makes the bees to start eating honey this becoming heavy an inactive.*
- *Lower the hive to the ground.*
- *Cut the combs from each top bar three centimetres from the surface and put them in a clean container rubbing off the bees using a twig. The 3cm of the comb left is for attachment of new combs.*
- *Place back the bars and do not disturb the brood.*
- *Return the hive to its position.*

- b) Name ten parts of an ox- drawn plough and state the function of each. (10marks)

- *Beam. This is the component onto which all other parts of the plough are attached. It also adds weight to the plough for better penetration.*
- *The handles. There are two handles, one on each side of the rear part plough. Handles enable the operator to see the implements in the direction when ploughing. □ The mouldboard. It invert the furrow slices □ Shore. It cuts the furrow slice horizontally.*
- *Landslide. The landslide presses against the wall of the unploughed land and therefore helps ot stabilize the plough.*
- *Land wheel. This is a wheel which is adjusted to regulate the ploughing depth.*
- *Draft rod. This is a metal bar which is attached to the main beam of the plough. At the front end of the draft rod there is a chain which connects it to the yoke.*

- c) Explain how physiological factors are used as a sign of ill or good health. (5marks)

- *fatigue*
- *weakness*
- *pregnancy*

- 25(a) Describe the process of milk let down in a cow. (6marks)

- *It involves the active participation of the lactating cow; and occurs after the animals is stimulated by a suckling calf by any other stimuli; such as washing of the udder with warm water/feeding, familiar noises;*
- *The pituitary gland is stimulated to produce oxytocin hormone;*
- *Oxytocin is transported by blood to the mammary glands;*

- *Oxytocin causes the contraction of the upper regions of the udder; which forces the milk into the gland astern.*
- b) Describe the procedure of embryo transplant in cattle.  
(9marks)
- *Female is injected with hormones; to make her produce more ova than a normal rate;*
  - *Ova are harvested form a high quality dairy cow;*
  - *The ova are fertilized in a test tube; with semen from a high quality bull.*
  - *The embryos that develop are stored in cold temperature to wait for implanting.*
  - *Implantation is done to other female animals; and hence called foster mother.*
  - *The embryo that develops when born produces a calf with superior characteristics*
- c) Describe cattle management during dipping  
(5marks)
- *Assemble the cattle near the plange dip/*
  - *Allow the cattle to drink water to minimize drinking of the dip wash solution.*
  - *Assemble the cattle in the collection yard.*
  - *Guide the cattle to the dip starting with young animals then older ones;  Allow the cattle to stand in the drainage race to drain off the dipwash;*
  - *Pregnant and sick animals should not be dipped.*
- 26(a) Outline the control measures of mastitis.  
(5marks)
- *Ensure complete and thorough milking is done;*
  - *After milking dip each teat in a teat dip containing antiseptics*
  - *Use a clean towel when drying the udder for each cow;*
  - *Use a strip cup to check for infected cows and quarters;*
  - *Remove sharp objects/treat wounds on teats*
  - *Control parasites such as ticks by using appropriate acaricides;  Infected animals should be milked last.*
  - *Treat infected animals using a teat cannula with an antibiotic;*
- b) Describe the marketing of eggs.  
(10marks)
- *Propect/carry out research for a market for eggs produced;  Sort the eggs according to colour; and size.*
  - *Standadise the sorted eggs into some colour and size;*
  - *Pack the eggs in crates of 6; or 30 eggs;*
  - *Transport the eggs with the egg trays arranged in stacks;*
  - *Sell the eggs through retailing; and through a cooperative; and directly to consumers;*
  - *Sale of egg should be done twice a week; to ensure supply of fresh egg;*
- c) Outline the general characteristics of chinchilla breed of rabbits.  
(5marks)
- *Grey and blue in colour.*
  - *Have an average weight of 4.5kg – 5kg.*
  - *Well-muscled / around back/muscular legs.  Ear area straight and stand erect.*
  - *Kept for meat and for production*
  - *Good breeders producing litter of between 6 – 9 kindlings.*
  - *Have good mothering ability.*

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