MARKING SCHEME

AGRICULTURE
FORM 3
PAPER 2
END TERM 2 EXAMINATION

JULY/AUGUST 2025

SECTION A (30 Marks)

Answer ALL questions in this section

1. State three methods of livestock selection in livestock. (1 ½ mks)
   - **Progeny testing**
   - **Mass selection**
   - **Contemporary comparison**
2. Give four factors that determine the amount of water taken by an animal. (2mks)
   - **Temperature**
   - **Animal species**
   - **Type of feeds take by an animal**
   - **Body size**
   - **Age of the animal**
   - **Health**
   - **Level of production**
3. State four factors to consider when sitting farm structures. (2mks)
   - **Soil type**
   - **Topography**
   - **Accessibility**
   - **Farmers preferences**
   - **Space for future expansion**
   - **Relationship between farm structure**
   - **Direction of prevailing wind**
   - **Drainage**
4. State four disadvantages of inbreeding system. (2mks)
   - **Loss of hybrid vigor**
   - **High rate of pre-natal mortality**
   - **Reduced performance**
   - **Loss off growth rates of animals**
5. Identify four reasons for castration in livestock production. (2mks)
   - **Controls breeding diseases**
   - **Controls breeding**
   - **Fast growth rates of animals**
   - **Controls breeding diseases e.g vaginitis and brucellosis**
6. State three types of specialized feeding practices in livestock. (1 ½ mks)
   - **Flushing**
   - **Steaming up**
   - **Creep feeding**
7. Name two types of roughages. (1mk)
   - **Dry**

- **Succulent**

8. State the functions of the following parts of a male's reproductive system. (2mks)

a) Epididymis
- **Storage of sperms temporarily**

b) Seminal vesicles

c) Urethra
- **Conducts both urine and sperms**

d) Scrotum
- **Encloses the testes**
- **Regulates the temperature for development of sperms**

9. Give four importance's of keeping animals healthy. (2mks)
- **To produce high quality products**
- **For animals to remain productive for long**
- **Reduce cost of treatment**
- **Fast growth rates**
- **Production of strong and healthy off springs**

10. State two signs of kindling in rabbits. (2mks)
- **Plucking for on the lower side of the belly to make a nest**
- **Goes off feeding**
- **restlessness**

11. Identify three systems of out breeding. (1 ½ mks)
- **out crossing**
- **cross breeding**
- **upgrading**

12. Give four heat signs in cattle. (2mks)
- **Maintaining other cows**
- **rise in body temperature**
- **restlessness**
- **frequent mooing**
- **reduced milk production**
- **clear mucus discharge from the vulva**
- **swelling and reddening of vulva**
- **clear mucus discharge from the vulva**

13. State two characteristics that distinguish land race from large white pigs. (2mks)

Land race	**large white**
- **Straight snout**	**- Dished out**
- **Dropping ears**	**- erect ears**

14. State four observable features of dairy breeds of cattle. (2mks)
- **Long tail switch**
- **Large stomach**
- **Docile**
- **Prominent milk veins**
- **Straight top line**
- **Lean body**
- **Wedge shape**
- **Well developed udder**
- **Well-set hind quarters to accommodate udder size**

a) Define the term docking as applied in sheep farming. (1mk)
- **This is cutting short lamb's tail 3cm away from the body**

b) State three reasons why docking is carried out in sheep. (1½ mks)

- **Facilitates easy tupping**
- **Equal distribution of fats**
- **Reduces the incidence of blow flies**

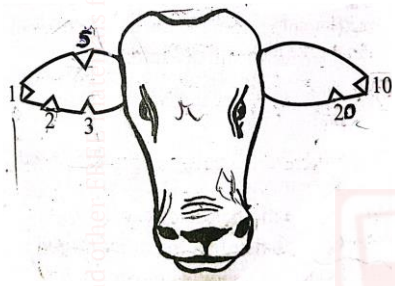
15. Define flushing. (1mk)

- **It is the practice of providing a female sheep with extra feeds of high nutrition value around service time**

SECTION B

Answer ALL questions in this section in the spaces provided

16. The diagram below illustrates a method of identification in livestock production. Study it and answer the questions that follow.



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a) Name the identification method illustrated above. (1mk)

- **Ear notching**

b) Give the identification number of animal illustrated in the diagram above. (1mk)

- **41**

c) Using the diagram illustrate how you can identify animals using numbers 24 and 36. (2mks)

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17. A dairy farmer is required to prepare 100kg of dairy meal containing 20% digestible crude protein DCP. Using the Pearson's square method, calculate the quantity of soya beans (40%DCP) and rice (16%DCP) the farmer requires for the dairy meal. (5mks)

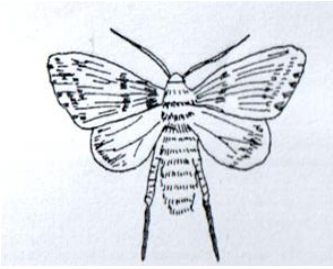
Soya bean 40% — **4parts of soya beans**

20%

16% — **20 parts of rice**

4 x 100 **20 x100**
24 soya beans **24** **83.33kg rice**
16.67kg soya beans

18. Study the diagram below illustrating a livestock parasite, study it and answer the questions that follow.



a) To faciliIdentify the parasite.
(1mk)
- **Tsetse fly**

b) Identify any two harmful effects of the parasite. (2mks)
- **Transmit diseases**
- **Causes anaemia**
- **Causes wound on the skin**

c) State three control measures of the parasite. (3mks)
- **Spraying affected areas with insecticides**
- **Destroying mass**
- **Fencing to keep away wild animals**

19. a) Identify the practice of cutting overgrown hooves in livestock. (1mk)
- **Hoof trimming**

b) List two tools that are used to carry the practice. (2mks)
- **Hoof trimmer**
- **Hoof cutter**
- **Sharp knife**

c) Give two reasons for carrying out the practice. (2mks)
- **To facilitate easy movement of the animal**
- **Controls foot rot disease**
- **To facilitate easy mating**

SECTION C (40 MARKS)
Answer any TWO questions in this section.

20. a) State five advantages of artificial insemination. (5mks)
- **It controls in breeding**
- **It helps to avoid keeping dangerous burs in a farm controls breeding diseases.**
- **No extra land that is required to grow pasture for the bull collected semen can be stored for a longer period of time.**
- **Do injury of small cows by large bulls**
- **Semen from the one bull can be used to serve many cows**
- **Small scale farmer benefit that cannot be able to keep a bull.**

b) State five differences between ruminants and non-ruminants. (5mks)

Ruminants	**Non-ruminants**
- Has 4 stomach chambers	**- has one stomach chamber**
- Produces alkaline saliva	**- Produces non- alkaline saliva**
- Water absorption occurs in abomasums	**- Water absorption occurs in the colon**
- Chew cuds	**- Does not chew cuds**

- **Synthesis of vitamin B and K in rumen** - **Not synthesis of vitamins**
- **Food is regurgitated** - **Not able to regurgitate food**

c) Discuss the reproductive system in poultry production. (10mks)

- **Ovary – Produces ova/yolk**
- **Oviduct – Receives yolk from the ovary fertilization takes place here chalazae is formed.**
- **Magnum – Secretion of thick albumen.**
- **Isthmus - Addition of water, mineral salts and vitamins**
  - Additional of shell membrane
- **Shell gland – Shell is added here and shell pigment**
- **Vagina – Temporary storage of egg**
  - Secretion of a fluid to reduce friction
- **Cloaca/ vent - Allows the egg to move out during laying**

21. a) Outline the factors that a farmer should consider when selecting materials for constructing a dairy cattle shed. (6mks)

- **Durability of the material**
- **Availability of the material**
- **Workability in the material**
- **Stability in the prevailing weather**
- **Strength of the material**
- **Use of the structure**

b) Explain six routine management practices carried out in rearing a dairy male calf. (6mks)

- **Hoof trimming for easy movement and to prevent foot rot**
- **Deworming – to control internal parasites**
- **Dipping and spraying – to control external parasites**
- **Vaccination – to boost the immunity of the animals against diseases**
- **Castration – to control breeding diseases and fast maturity of the animals.**
- **Identification – which is putting marks on the animal body for ear identification.**

c) List and explain eight factors that are considered when selecting a sow for breeding. (8mks)

- **Young age – Select young animals that have not given birth more than three times as they have a long productive life.**
- **Behavior – Animals with bad behaviors e.g cannibalism, aggressiveness =, egg eating should be called.**
- **Quality of product – Select animals that give products of high quality e.g. meat, wool and milk**
- **Mothering ability – Select animals that can rear their young ones up to wearing**
- **Adaptability – animals with good adaptability to the prevailing conditions of an area should be selected**
- **Prolificacy – Select animals with ability to give birth to many of springs at a time.**
- **Body conformation – Select animals with proper body conformation**
- **Health – Sick animals do not breed well, are expensive to keep, can't be resistant to diseases hence shouldn't be selected.**
- **Physical fitness – Select animals that are physically fit**
- **Good performance – Animals with high production should be selected.**

22. a) Describe six signs of furrowing in a sow. (6mks)

- **Swelling and reddening of vulva**
- **Full udder**
- **Collection of bedding materials and**
- **Making of a nest at the corner**
- **Restlessness**
- **Loss of appetite**
- **Slight mucus discharge**

b) Discuss the qualities of a good storage structure. (5mks)

- **Presence of rat guard to keep rodents away**

- **Presence of roof – to prevent entry of moisture/ water ruin**
- **Easy to load and offload – should have a ladder**
- **Well ventilated – it should be fitted with a mesh wire to allow air circulation**
- **Well secured to prevent theft**
- **Cool to prevent overheating thet could crack the grains**
- **Pest free/ disease free – It should be easy to control pests and diseases**

c) Explain the general methods of controlling diseases in livestock. (9mks)

- **Proper housing – prevents draught which reduces**
- **Isolation of sick animals – this reduces the spread of a disease**
- **Vaccination – It increases immunity in an animal body to fight diseases.**
- **Proper feeding – This controls nutritional diseases e.g. milk fever control of parasites – This reduces attack of diseases as some parasites transmit diseases others can cause diseases**
- **Proper dispatch of carcass – Reduces spread of diseases e.g anthrax**
- **Treatment of animals – Restores the health of an animal and reduces spread of a disease**
- **Use of articial insemination to control breeding diseases**
- **Quarantine movement of sick animals should be restricted to control diseases e.g foot and mount**
- **Hygiene – It helps in controlling of diseases e.g mastitis**