

NAME: ..... ADM NO: ..... CLASS: .....

443/2

**AGRICULTURE**

**PAPER 2**

**FORM FOUR**

**TIME: 2 HOURS**

**INSTRUCTIONS:**

- ❖ This paper consists of three sections A, B and C.
- ❖ Answer all questions in sections A and B and any two questions in section C.
- ❖ All answers must be written in the spaces provided.

**SECTION A: (30 MARKS)**

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

1. Name three types of specialized feeding carried out in livestock management. (1 ½ mks)
  - **Creep feeding**
  - **Flushing**
  - **Steaming up**
2. Name the breed of sheep adapted to wet and marshy conditions of Kenya highlands. (1 mk)
  - **Romney marsh / kent**
3. Give two ways of sterilizing a milk churn. (1 mk)
  - **Wash with hot and suitable detergent**
  - **Use chemical sterilizers**
  - **Drying in the sun**
4. Define the term epistasis as used in livestock production. (1mk)
  - **Combination of genes which individually could be undesired**
5. Name two methods used in ration computation. (1mk)
  - **Trial and error**
  - **Pearson's square method**
6. Give five reasons for care and maintenance of farm tools and equipment (2½ mks)
  - **To reduce cost of replacement**
  - **To increase durability**
  - **Increase efficiency**
  - **Prevent injury to the user**
  - **Avoid damages to the tool**
7. Give two reasons for throwing grains to poultry on the litter in a deep litter poultry house. (2mks)
  - **To help turn the litter to keep it dry**
  - **To keep poultry busy**

8. What are the terms used to describe the young ones of the following livestock. (2mk)
- **Rabbits** - **Kindling**
  - **Fish** - **Fingerling**
  - **Goat** - **Kid**
  - **Donkey** - **Foal**
9. Name the causal organisms of the following diseases in livestock. (2mk)
- **East coast fever** - **Protozoan/ *Theirelia parva***
  - **Trypanosomiasis** - **Protozoan/ Trypanosome**
  - **Rift Valley fever** - **Virus**
  - **Anaplasmosis** - **Protozoan/ *Anaplasma marginale***
10. Give four reasons for castrating farm animals. (2mk)
- **Control breeding diseases**
  - **Makes animal docile**
  - **improves meat quality**
  - **Control inbreeding**
  - **Increases weight gain**
11. List any three light breeds of poultry (1½)
- **Minorca** - **Sykes**
  - **Ancona**
12. Give two qualities of a creep feed that makes it suitable for piglets (2mk)
- **Highly palatable**
  - **Highly digestible**
  - **Rich in proteins**
13. State four management practices carried out in sheep during preparation for tugging (2mk)
- **Crutching/tagging/barling**
  - **Raddling**
  - **Hoof trimming**
  - **Ringling**
14. Name any two plumbing tools (1mk)
- **Stock and die**
  - **Pipe wrench**
  - **Pipe cutter**
15. List two symptoms of bloat attack in cattle (1mk)
- **Distended left side of belly**
  - **Immobility**
  - **Digestive complication**
  - **Constipation**
16. What do you understand by the following terms as used in livestock health? (2mk)
- (a) Predisposing factors:
- Conditions inside or outside the body of animal which lead to the animal contracting a disease or injury.**

b) Rigor mortise: - **Stiffening of joints**

17. Name four control measures of fleas in a flock of layers (2mk)

- **Dusting the poultry house/nest**
- **Ensure cleanliness**
- **Apply petroleum jelly on infected parts**
- **Dust birds with insecticide**

18. Differentiate between the following tools (2mk)

(i) Sickle - **cutting back pyrethrum stack/harvesting rice, grass**

Secateurs - **soft branches /tungs**

(mark whole)

(ii) A pair of tin snip and a pipe wrench

- Tinsnips – **Cutting through sheet of metal,**
- Pipe wrench: - **Loosening or tightening metal pipes.**

19. What is the vector of Nagana? (½ mk)

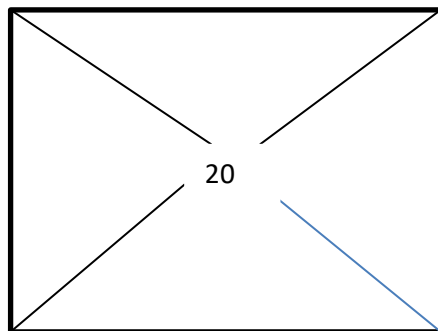
- **Tsetsefly**

### SECTION B: (20MARKS)

Answer all the questions in the spaces provided.

20 a) Compute 200kg feed ration with 20% DCP from maize with 10% DCP and cotton seed cake containing 45% DCP. (4mk)

Maize 10%



$$25 \text{ parts maize – amount } \frac{25}{35} \times 200 = 142.86\text{kgs}$$

Cake 45%

$$\frac{10}{35} \text{ parts cake – amount } \frac{10}{35} \times 200 = 57.14\text{kg}$$

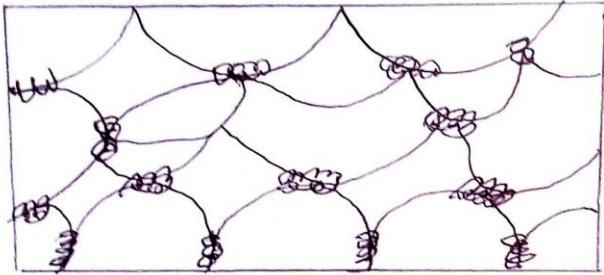
(b) Name two feed ingredients that should be added to balance the feed ration above. (2mk)

- **Vitamins; minerals**

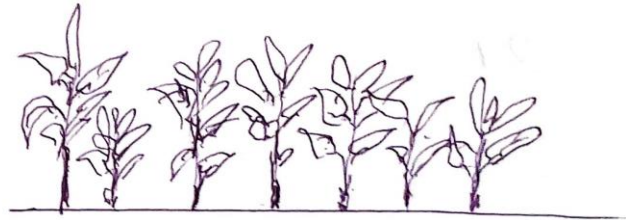
(c) Name two advantages of using a sub-soiler during land preparation (2mk)

- **Breaks hardpans**
- **Cultivate compacted soil**

21. The diagram H and J show two types of fences



H



J

- a) Identify each type of fence (2mk)
- H – Chain link/woven wire fence
  - J – Live fence/hedge
- b) Name the correct material and correct tool for fastening wooden posts when constructing the types of fence illustrated in diagram H. (2mk)
- Material – U – nails/staples
  - Tool: Claw hammer/fencing hammer/pliers
- c) State three advantages that fence J may have over fence H (3mk)
- More aesthetic value
  - Act as wind break
  - Source of livestock feed
  - Cheaper to establish
  - Source of fruits
  - Source of firewood
  - Provides organic matter

22. Study the diagram below and answer the questions that follow



- (i) Name the type of identification illustrated above (1mk)
- Ear notching
- (ii) Give the identification number of the pig illustrated above (1mk)
- 110

- (iii) Using a diagram, illustrate how animal number 83 can be identified using the above method. (2mk)



- (iv) What is the use of metal rails in a farrowing pen? (1mk)
- Prevents sow from crushing the piglets.

### SECTION C: (40 MKS)

Answer any two questions from this section.

- 23 a) Describe any four general effects of parasites on livestock (8mk)
- **Sucking blood:** Some parasites suck blood from their hosts causing Anaemia and death
  - **Parasites eat food intended for livestock** – this can lead to malnutrition and weakness in the host.
  - **Obstruction:** Internal parasites block the alimentary canal which can cause death.
  - **Transmission of disease** – can cause death or lower production in livestock.
  - **Damage internal tissues and organs preventing proper functioning**
  - **Irritation to animals** : some parasites make animals uncomfortable
- (4 x 2 = 8 mks)  
(Explanation 1 mk)  
(Stating 1 mk)
- b) Name two causes of livestock diseases (2mk)
- **Pathogens eg bacteria, virus, protozoa and fungi**
  - **Chemicals**
  - **Physical eg injuries**
  - **Nutritional causes**
- c) Describe East Coast Fever (ECF) under the following subheadings
- (i) Animals attacked - **Cattle** (1mk)
- (ii) Causal agent - **Theirelia parva** (1mk)
- (iii) Vector – **Brown ear tick** (1mk)
- (iv) Symptoms
- **High fever**
  - **Lachrymal discharge**
  - **Swelling of lymph nodes**
  - **Difficult breathing**
  - **Self- isolation from others**
  - **Haemorrhage in the vulva and mouth** (5mk)
  - **Coughing**
  - **Sight impairment**

- (v) Control (2mk)
- **Eradication of ticks**
  - **Intra-muscular injection of antibiotics and iron**
  - **Control strange animals from the farm**

24 a) Explain the uses of the various hand tools in the construction of the Kenya top bar hive. (12mk)

- **Claw hammer – driving nails in and out of wood**
- **Tape measure/metre rule – measuring length of pieces of material**
- **Clamp – holding pieces of wood together when joining**
- **Pliers – cutting wires**
- **Try square – determining right angles on cutting points**
- **Marking/mortise gauge – marking points to cut/plane**
- **Ball pen hammer – Straightening/shaping sheet of metal**
- **Hand saw/Tenon saw – cutting pieces of wood**
- **Tinsnips – cutting roofing sheet/metal sheet**

(8 x 1 ½ mks = 12 mks)

(1/2 mk) – naming

(1mk – explaining)

b) Describe the management practices that would ensure maximum yield of fish in a fish pond. (8mk)

- **Control stocking rate**
- **Control water pollution**
- **Supply adequate feed**
- **Provide appropriate feed**
- **Aerate the water by ensuring constant inflow and outflow**
- **Crop at correct stage**
- **Maintain water level**
- **Repair broken/cracked dykes**
- **Clear vegetation around the pond**
- **Control predators**

(8 x 1 = 8 mks)

25 a) Describe various cultural uses of livestock (8mk)

- **Status symbol – One is regarded wealthy on owning large herds of cattle, sheep or goats.**
- **Medium of exchange – livestock were used during barter trade**
- **Social ceremonies – ceremonies like marriage and funerals had live or slaughtered animals**
- **Recreational purpose – some activities like cock fighting, bull fighting may utilize their time constructively.**

b) Describe various livestock rearing practices

(12mk)

- **Feeding** – It enhances maintenance and productivity of the animal. Also important in preventing diseases in animals.
- **Parasite and disease control** – Ensures animals remain healthy and productive.
- **Breeding practices** – Ensures multiplication of healthy animals
- **Identification** – Facilitates record keeping and other aspects of livestock management
- **Debeaking** – Important in poultry to control vices e.g cannibalism and egg eating.
- **Tooth clipping** – Removal of canine teeth in piglet 24 hours after birth
- **Culling** – Removal of unproductive animals from a breeding herd.

