

# NTIMA, NYAKI AND MUNICIPALITY CLUSTER EVALUATION 2016

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

### Agriculture (443/2) Paper 2 July/August 2016 **MARKING SCHEME**

#### **(SECTION A 30 MKS)**

##### **1. Disease predisposing factors**

- Skin colour of the animal.
- Species of the animal.
- Breed of the animal
- Age of the animal
- Sex of the animal
- Poor housing conditions
- Stocking rate
- Environmental factors

(4 x ½ = 2 mks)

##### **2. Reasons for dehorning**

- To reduce the spaces occupied by animals in the shed and during transportation.
- To ease the handling of animals
- To reduce destruction of structures
- To make the animals docile.
- To reduce injuring of the farmer and other animals

(4 x ½ = 2 mks)

##### **3. Distinguishing colour for the following animals**

a) Chindilla Rabbit - grey

b) Toggenburg goat- brown with two white stripes running from eyes to nose

(2 x 1 = 2 mks)

##### **4. Differences of the following tools**

a) Bastard file - is used for smoothing metal while wood rasp is used from smoothing surfaces of wood

(2 x 1 = 2 mks)

b) Coping saw - is used for cutting curves in wood while hacksaw is used for cutting metal

(2 x 1 = 2 mks)

##### **5. Factors that contribute to depreciation of farm equipments**

- Age of the equipment
- Wear and tear/use

- Lack of maintenance practices
- Exposure to weather/improper storage
- Wrong use of the equipment
- Obsolescence /change in technology

(4 x ½ = 2 mks)

##### **6. Intermediate host of liverfluke**

- Water snail/mud snail or lymnea spp.

(1 x 1 = 1 mk)

##### **7. Methods of lambing management**

- Drift lambing - ewes isolation following lambing
- Pen lambing - ewes isolation following appearance of lambing signs

(2 x 1 = 2 mks)

##### **8. Parts of the hen frequently attacked by fleas**

- Around the eyes
- On the ear lobes
- On the combs
- On the wattles

(4 x ½ = 2 mks)

##### **9. Functions of clutch in a tractor**

- Allows gradual engagement of the engine power to the drive wheel
- Enables the driver to shift from one gear to another
- Allows breaking the drive from the engine in order to stop the tractor
- Transfers power from the engine to the power take off shaft

(4 x ½ = 2 mks)

##### **10. Intensive rearing systems of poultry**

- Deep litter system
- Battery cage system

(2 x ½ = 1 mk)

##### **11. Methods commonly used in identifying sheep**

- Ear tagging
- Ear notching

(2 x 1 = 2 mks)

##### **12. Characteristics of the African wild bee**

- Well adapted to high temperatures
- High flying power

- More active in search of food and water
- Fairly resistant to the diseases that attack bees

(2 x 1 = 2 mks)

**13. Reasons why harvesting honey at night is discouraged**

- It is difficult to distinguish between white combs and dark combs
- Contamination of harvested honey with brood.
- Bees can be crushed because they are not properly seen.
- In order to avoid accidental bush fires

(3 mks)

**14. Components of a transmission system in a tractor**

- Gear box
- Clutch
- Differential
- Final drive

(4 x 1/2 = 2 mks)

**15. Feed additives in livestock nutrition**

- Hormones such as stilboestrol
- Antibiotics such as tetracycline
- Medicants such as coccidiostat

(2 x 1/2 = 1 mk)

**SECTION B(20 MKS)**

**16. a) Name of implement**

- An ox-mould plough

(1 x 1 = 1 mk)

**b) Function of depth rod**

- Used for adjusting the width and depth of ploughing

(1 x 1 = 1 mk)

**c) Disadvantages of using OX -mould plough**

- It is slower because it is drawn by animals
- Shallow cultivation is achieved
- It has a short use life

(3 x 1 = 3 mks)

**17. i) Computation of 2000 kg ration with 20% DCP from 10% DCP maize and 45% DCP cotton seed using Pearson's square method**

$$10/35 \times 2000 \text{ kg} = 571.4 \text{ kg} \checkmark 1 \text{ of cotton seed cake.}$$

$$25/35 \times 2000 \text{ kg} = 1428.6 \text{ kg} \checkmark 1 \text{ of maize}$$

(Total = 4 mks)  $\checkmark 1/2$   $\checkmark 1/2$

Maize 10% 25 parts of maize  $\checkmark 1/2$

ii) Feed conversion ratio for a boar

Amount of feed consumed: weight gained  $\checkmark 1/2$

280 kg : 70 kg

cotton seed cake 45% 10 parts cotton seed cake  $\checkmark 1/2$

4 : 35 total parts

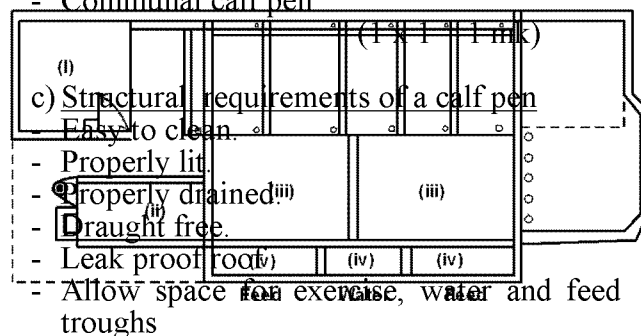
Ratio = 4:1

(method = 1 mk, answer = 1 mk) = (2 mks)

**18. a) Locations of store, calf pen, walking area and food and water trough area using roman numbers**

**b) Type of calf pen in the zero grazing unit**

- Communal calf pen



(4 x 1/2 = 2 mks)

**19. Missing words from the table**

- |                |            |            |
|----------------|------------|------------|
| i) (a) Calf    | (b) Piglet |            |
| ii) (c) Heifer | (d) Pullet | (e) Hogget |
| iii) (f) Boar  | (g) Cock   | (h) Ram    |
- (8 x 1/2 = 4 mks)

**SECTION C (40 MKS)**

**20. Life cycle of a three host tick**

- a) - Eggs on the ground hatch into larvae
- Larvae climb onto the 1<sup>st</sup> host and suck blood, become engorged and drop to the ground
- The nymph seek and climbs on to the second host and their feeds

- The engorged larvae drop on the ground and moult into adults
- The emerged adults find and climb on third host and feed, they mate on the host and females drop off to the ground to lay eggs after which they die.

(7 x 1 = 7 mks)

b) Tick control methods

- Natural or biological method
- Burning infected pasture
- Ploughing the pasture
- Fencing
- Rotational grazing
- Hand picking and picking
- Chemical control

(6 x 1 = 6 mks)

c) Characteristics of effective acaricides

- Are able to kill ticks
- Are safe to use
- Are stable or have a long storage life
- Effective after mixing with drug, mud or hair

(4 x 1 = 4 mks)

d) Methods of applying acaricides

- Spraying
- Dipping
- Hand dressing

(3 x 1 = 3 mks)

21. a) Hand milking

- Assemble all milking equipment
- Put the cow in a milking shed and restrain it appropriately
- Wash the udder and teats with warm water mixed with suitable sanitising agent
- Dry the udder with a clean towel
- Use strip cup to check for mastitis
- Carry out milking by squeezing the milk out
- Strip the udder dry
- Dip the teats in anti-mastitis solution after milking
- Applying milking jelly (milk salve) on the teats
- Release the cow.

(10 x 1 = 10 mks)

b) Clean milk production practices

- Keep cows healthy/free from diseases.
- Ensure cows flanks and udder region is clean.
- Milkman should be clean, short nails and hair covered.
- Ensure milking shed is clean.
- Clean and sterilize milking utensils
- Filter and cool the milk
- Cover and keep milk in a cool dust free room.
- Avoid feeding cows with feed which can taint milk just before milking.
- Don't expose milk to direct sun.

(8 x 1 = 8 mks)

c) Milking equipment

- Milking bucket/pail
- Udder drying towel
- Milking stool
- Milking churn
- Strip cup
- Milk strainer

(2 x 1 = 2 mks)

22. a) Stocking of fish in a fish pond

- Obtain fingerlings from reputable hatcheries
- Transport fingerlings in oxygenated containers with clean water
- Introduce the fingerlings into the pond by lowering the container into the pond water to allow them swim away

(3 x 1 = 3 mks)

b) Feeding fish

- Use kitchen waste, rice bran, groundnut cakes
- Feed at regular intervals
- Feed just adequate feeds to avoid remnants in the pond
- Change feeds from time to time
- Feeding should be done at specific times of the day

(6 x 1 = 6 mks)

c) Practices carried out on fish before preservation

- Clean the fish
- Remove scales and slime.
- Open fish on side to remove gut and intestines
- Clean abdominal cavity thoroughly
- Keep fish in open containers before preserving

(5 x 1 = 5 mks)

d) Management practices in fish rearing

- Feeding
- Control of predators
- Manuring /fertilizing the pond

- Control vegetation in the pond
  - Change water regularly /ensure continuous flow of water in the pond.
  - Protect pond from pollution
- (6 x 1 = 6 mks)