FORM FOUR EVALUATION TEST

END OF 2ND TERM – 2018

MARKING SCHEME

AGRICULTURE F.4 PP2 EXAM

July/August

1. Importance's of keeping animals health.

   - Healthy animal grows well and fast enough to reach maturity.
   - Good health gives animals a longer economic and productive life.
   - Healthy animals gives maximum production or performance.
   - Healthy animals produce good quality product.
   - Healthy animal are economical and easy to keep.
   - Healthy animals will not spread diseases to either animals or human beings.

   Mark first four points 4 x ½ = 2mks

2. a) Crutching – This is practice of dipping or cutting wool around the vulva of ewe's.

   Ringing – this is the process of trimming, dipping or cutting wool around the sheath of the penis in rams.

   Correct definition = 2 x 1 = 2mks

   b) Steaming up – This the provision of extra feeds of high nutritive value to an animal during the last weeks of gestation.

   Flushing – feeding of female livestock with high quality feeds around service time.

   Correct definition 2 x 1 = 2mks

3. Features that help in differentiating the dromedary camel from Bactrian camel.
   - Dromedary has one hump while Bactrian has two humps.
   - Dromedary has less hair on its body while Bactrian has more hair.
   - Dromedary has long legs while Bactrian has short compact legs.

   3 x ½ = 1 ½ mks

4. Functions of crop in digestive system of a chicken.

- Softening/moistening of food
- Storage of food

1 x 1 = 1mk

5. a) Reasons for candling egg in poultry production.

- Determine freshness
- Detect abnormalities
- Confirmation of chick development

b) Qualities of shell to be considered

- Texture/smoothness of the shell
- Absence of cracks in the shell
- Cleanliness/absence of blood stains
- Oval in shape

3 x ½ = 1 ½ mks

6. Pre – disposing factors of mastitis.

- Age – should be older animals rej. Young animals.
- Stage of lactation period
- Udder attachment
- Incomplete milking
- Mechanical injuries
- Poor sanitation
- Poor milking technique

Mark first four point 4 x ½ mks = 2mks

7. Mechanical methods of controlling ticks.

- Burning the infested postures
- Interfering with or altering the ticks environment.
- Fencing the pasture land and farm.
- Starving the ticks to death.
- Hand picking the ticks from livestock and killing them.

4 x ½ = 2mks

8. Structural features of ideal calf pen.

- Concrete floors
- Adequate space
- Single housing
- Proper lighting
- Proper drainage
- Draught free
- Leak proof roof

Mark first four points 4 x ½ = 2mks

9. Problems associated with tractor hire service.

- Not readily available leading to late land preparation.

- Poor quality work unless under strict supervision.

1 x 1 = 1mk

10. Functions of following farm tools and equipment.

i) Sickle – for cutting back pyrethrum stalk.
- harvesting rice and other grasses.

ii) Strip cup - For checking mastitis in milk.

iii) Claw hammer – used for driving and removing nails from wood.

- Used in straightening nails when bent.

iv) Mason's trowel – for placing mortar between construction stones and bricks.

4 x ½ = 2mks

11. Properties of good vaccines.

- Immunity it produces should be as good as natural immunity.
- Should have along keeping life.
- Should be easy to administer to the animal.
- Should have no side effect when inoculated.
- Should be compactable with other vaccines given to the animals.
- A single dose should produce life long immunity.

First four point 4 x ½ = 2mks

12. Factors affecting digestibility.

- Chemical composition of the feed.
- The form in which the feed is offered to the animal.
- The species of the animals.
- The ratio of energy to protein will affect digestibility.
- The quantity of feed already present in digestive systems of an animals.

4 x ½ = 2mks

13. Farm structures necessary when handling dairy animals.

- Crushes
- Cattle sheds
- Calf pens
- Milking shed
- Fences

14. Ways of marketing beef cattle in Kenya.

- Kenya meat commission.
- Livestock marketing division, ministry of livestock development
- local slaughter houses/butcheries
- licensed stock traders

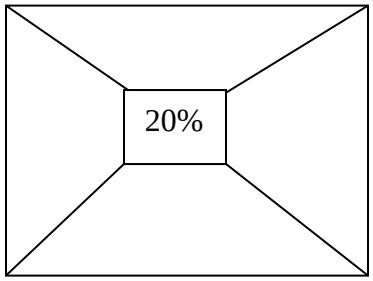
3 x ½ = 1 ½ mks
Mark first three points

15. Implements that are attached to power take off shaft.

- Mowers
- Planters
- Rotavators
- Water pumps
- Boom sprayers
- Grinding machine
- Maize shelters
- Fertilizer spreaders

Mark first four points 4 x ½ = (2mks)

16. a) Rice
16% DCP ½ mrk



20 parts of rice
½ mrk

Soya beans
40% DCP ½ mrk

4 Parts of soya bean

½ mrk

Total parts 24

Rice = $^{20}/_{24}$ x 100 = 83.3kg (1mk)

Soya beans = $^{4}/_{24}$ x 100 = 16.7kg (1mk)

b) Trial and error method.

17. a)
K - fallopian tube/oviduct
L - Ovary
M - Uterus or womb
N - Vagina

4 x ½ = 2mks

b) Functions of:

K –receive mature ovum from ovary
It's the site for fertilization

L - It's where the ova are produced
- it secretes sex hormones such as progesterone and oestrogen hormone.

M - The fertilized ovum, also called zygotes is implanted here.
- It supports the growth of foetus until birth.

6 x ½ = 3mks

18. i) Name the parts

A - Cylinder wall
B - Inlet port

C - Transfer port

3 x 1 = 3mks

ii) Compression and induction stroke
1 x 1 = 1mk

iii) In the combustion chamber. 1 x 1 = 1mk

19. a) Crushing and straining method (1 x 1 = 1mk

b) Use of heat
use of centrifugal extractor 1 x 1 = 1mk

c) - Honey combs are crushed and strained using a muslin cloth into enamel basin.

- The scum formed is removed using a wooden spoon.
- Honey is put in a suitable container that is tightly closed.

Procedure should be followed to score 3 x 1 = 3mks

SECTION C: (40MKS)

20. **a) Parts and functions of plunge dip.**

i) Animal holding yard – its used for holding animals before dipping.
- it also contains stone to ensure that mud form the hooves is removed before getting into the dip wash.

ii) Footbath – it washes the feet of the animals before they get into the dip wash.

iii) The jump – it allows animals to jump singly into the dip tank.

iv) Dip tank – this is where animals are completely immersed in a dip wash containing an acaricide.

v) Drainage race – it allows the dip wash from the animals body to drain back to the dip tank.

vi) Drying yard – it hold animals for a while before being released to the pastures. This help in preventing pasture contamination as well as allow all animals to be released at the same time.

vii) Silt trap outlet – it traps mud and during in dip wash before it flows into the dip tank to prevent siltation in the dip tank.

viii) Dip tank shelter – it lowers the evaporation of the dip wash and avoid dilution of the water into the water tank.

ix) Water tank – used for storing water either from the roof catchment or from any other sources.

x) Waste pit – is used as a damping site for sediments from the dip tanks.

b) **Advantages of live fence.**

- They are cheap and easy to establish since seedlings can easily be raised in nursery bed.
- The tall varieties such as kei apple act as wind breaks.
- The have an aesthetic value.
- Their roots hold the soil firmly thus controlling soil erosion.
- Some species such as lantana camara act as a livestock feed.
- They provide shade to livestock.
- They act as a sources of organic matter and wood fuel.
- Some species have medicinal value.
- Thorny species are effective in preventing the intruders.

21. a) **Management of one day old chicks in a brooder until they are eight weeks.**

- Provide enough and clean water all the time.
- Maintain a high degree of hygiene in the brooder e.g clean feed troughs.
- Remove the newspapers after the chicks have learnt feeding from the troughs.
- Provide enough and clean chick mash from day 1 up to 8 weeks.
- Incorporate grit on the 6th week.
- On the 7th week, introduce growers mash in the ratio of ¼ growers mash: ¾ chick mash.
- Feed on growers mash only from the 9th week.
- Place a foot bath containing disinfectant solution at the entrance of the brooder house.
- Maintain brooder temperature as follows:
  Week 1 33 – 35^{0}C.
  Week 2 30 – 32^{0}C
  Week 3 27 – 29^{0}C
  Week 4 24 – 26^{0}C
- Withdraw artificial heating after week 4.
- Vaccinate against disease like Newcastle.
- Incorporate antibiotics and coccidiostats in feeds and water to control diseases.
- Provide a wire guard around the heat sources so that the chicks are not burnt.
- Apply insecticide dust on the floor against external parasites. For external parasites like fleas attack combs, wattles, shanks and toes, smear petroleum jelly on them so that they suffocate and die.

- Incorporate de – wormers in water to control internal parasites.
- Isolates and treat the sick birds.
- Maintain proper ventilation all the time.
- Expand the brooder area after every 5 days to accommodate the growing chicks.
- Carry de – breaking 9 days to the end of brooding to control cannibalism.
- Keep appropriates records.
- Dispose off dead chicks well.
- Avoid damp conditions which would expose the chicks to pneumonia through provision of enough ventilation.
- Ensure that the brooder is dimly lit to avoid toe pecking and cannibalism.

12 x 1 = 12mks
Mark any twelve points

b) **Causes of cannibalism in poultry.**

- External parasites – This may cause cannibalism in that the birds may want to remove parasites like flea from combs of others. In doing so there may be an injury that results in blood coming out of the wound. This makes bird's peck on the wound.
- Overcrowding – this makes birds see others closely and its easy for them to detect something to peck at.
- Prolapse – This occurs when the cloaca does not retreat after the hen has laid egg. The cloaca is pecked at by others.
- Bright light – this makes the toes of chick shine, resulting in toe – pecking.
- Mineral deficiency – unbalanced feeds makes birds to try getting mineral elsewhere.
- Introduction of a new bird in a flock. This causes fighting resulting in cannibalism after an injury.

1 mark stating 1 mark explaining

4 x 2 = 8mks

22. a) i) **Causal organism**

Virus 1 x 1 = 1mk

ii) **Signs of infection**

- Birds have difficulties in breathing. They produce a harsh, grating rasping sound when breathing.
- The beaks remain wide open and necks are strained.
- The birds become dull.
- The birds stand with eyes closed all the time.
- The birds loose appetite.
- There are nasal discharges which forces the bird to shake their heads to clear it.
- Birds walk with a staggering motion since the nervous systems is affected.
- Often the birds have their beaks and wings down.
- Birds produce watery greenish diarrhea.
- Eggs laid have soft shells.

7 x 1 = 7mks
Mark first seven points

iii) Control measures

- Kill all the birds and burn them.
- Vaccination should be done during the first six weeks and then two to three Months later.
- Practice quarantine.

2 x 1 = 2mks

b) Factors considered when selecting a breeding stock.

i) Age – young animals those that have parturated for not more than three times, should be selected. This is because they have a longer productive life.
ii) Level of performance – only those animals with the highest production level should be selected.
iii) Physical fitness – animals selected should be free from any physical defect such as being, Non – eyed, limping, irregular number of teats.
iv) Health – animal selected should be healthy. Sick animals do not breed well and those falling sick frequently are expensive to keep.
v) Body conformation – animals for breeding should be selected according to their proper body conformation e.g a dairy animal should be wedge – shaped with larger udder, thin legs, long necks and others.
vi) Temperature or behavior – some animals within a breed might have bad temperament such as cannibalism and egg eating. Such animals should be culled.

vii) Quality product – select animals that give product of high quality. In wool production for example breeds that produce fine, long, elastic and pure white wool are selected.

viii) Mothering ability – animals selected should have a good mothering ability, that its animals with good natural instinct towards young ones. This will enable them to rear the young ones up to weaning.

ix) Adaptability – animals selected should be well adapted to the prevailing climatic condition in the area.

x) Prolificacy – animals selected should be highly prolific, that is animal with an ability to give birth to many off springs at a time.

1 mark stating, 1 mark explaining

5 x 2 = 10mks

❖❖❖❖ **E N D** ❖❖❖❖