MARKING SCHEME
AGRICULTURE PP 2
TERM 3 2019

1. Signs of ill health in livestock. (2mks)
   - Starring coat
   - Difficult breathing
   - High fever
   - Dullness
   - Loss of body weight
   - lachrrmation

   ½ x 4 = 2mks
2. Materials used in the construction of Kenya top bar hive. (2mks)
   - Timber
   - Iron sheets
   - Nails
   - Wire loop

   ½ x 4 = 2mks
3. State four management practices carries out on a cows during parturition. (2mks)
   - Separate from rest
   - Assist weak causes to suckle colostrum
   - Clean calves/dry/wipe calves dry
   - Provide artificial respiration incase of breathing problem
   - Cut and disinfect the umbilical cord
   - Put the calve in a warm place
   - Livestock attendant should be nearby
   - Provide assistance in case of malpresentation.

   ½ x 4 = 2mks
4. Name four methods of controlling Newcastle disease in chicken (2mks)
   - Routine vaccination during the six weeks disinfest the poultry house before introducing a new flock
   - Obtain chicks from reliable source
   - Imposition of quarantine+
   - Kill the infected birds and burn them

   ½ x 4 = 2mks
5. State the role of the following practices when rearing piglets
   (i) Iron injection – to prevent anaemia in piglets (½mks)
   (ii) Tooth clipping - reduce incidence of piglets injuring the mother (½mks)

Reduce injury among piglets when playing (½mks)
Reduce chances of injury to the handler (½mks)

6. State two functions of fats and oils in animals body. (1mk)
   - Constituent of body cells
   - Supply energy after oxidation
   - Excess is used to insulate body/prevent loss of heat
   - Protection of the organs i.e. heart

   ½ x 2 = 1mk
7. State two functions of a queen bee in a colony (1mk)
   - Lay fertile eggs
   - Control the rest of the members/colony/production of pheromone
8. Name four species of fresh water fish reared in Kenya. (2mks)
   - Cat fish
   - Carps
   - Blue gill
   - Tilapia
   - Bass
   - Nile perch
   - Trout
   - Tench

   ½ x 4 = 2mks
9. State two forms in which tapeworms are found in livestock (1mk)
   - Eggs
   - Bladder worms
   - Cysts
   - Adult

   ½ x 2 = 1mk
10. Give the distinguishing colour for each of the following breeds of livestock
    (i) Chinchilla rabbit – grey/silver (½mks)
    (ii) Toggen burg goat – brown with two white stripes running down the face (½mks)

11. State two functions of ventilation in an animal house (1mk)
    - To allow in fresh air circulation
    - To allow in light

    ½ x 2 = 1mk
12. Give two reasons for using litter in a poultry house. (1mk)
    - Keep birds busy scratching hence reduce cannibalism
    - Give comfort and warmth to the birds
    - Help in dry dropping

    ½ x 2 = 1mk
13. State one role of each of the following ingredients as used in preparation of artificial colostrums.
    (a) Castor oil – provide a laxative effect in artificial colostrum (1mk)
    (b) Cod liver oil – provide vitamins in the artificial colostrum (1mk)
14. State four reasons for breeding animals. (2mks)

- To increase genetic value of livestock hence production capacity to the animal
- To obtain high quality animal products
- To increase the disease resistance of the animals
- To change breed characteristics of an animal for the specific economic purpose
  ½ x 4 = 2mk

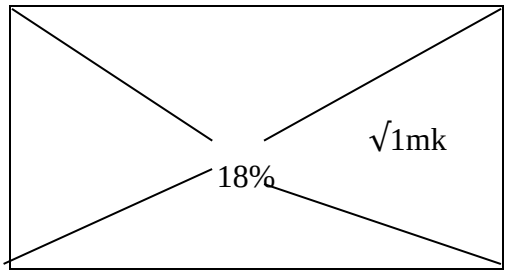
15. State the functions of each of the following
    (a) Shovel – mixing mortar /concrete (½mks)
    (b) Strip cup - detect mastitis infection in milk (½mks)
    ½ x 2 = 1mk
16. Why is it necessary to have guard rails in a farrowing pen? (1mk)
    - Prevent sow from crushing piglets
    - Prevents sow from eating creep feed
17. Distinguish between the following practices as used in livestock production.
    (a) Cropping and harvesting in fish farming (1mk)
    Cropping is selective removal of fish of marketable size from the pond
    Harvesting is the removal of all the fish from the pond
    (b) Crutching and ringing in sheep management (1mk)
    Ringing – cutting of wool around the sheath of penis of a ram to facilitate mating
    Ditching – cutting of wool around the external reproductive organs of ewe to facilitate mating.
18. State three instances when a bee keeper may handle bees. (1½mks)
    - During stocking of the hive
    - During inspection of the combs
    - During harvesting of the honey
    - When moving beehive from one place to another
      ½ x 3 = 1 ½ mks
19. State three functions of rumen in ruminant animals (1½mks)
    - Fermentation of the food
    - Synthesis of vitamin B complex/vit K
    - Act as temporary storage of food before regurgitation
    - Microbial digestion occurs
      ½ x 3 = 1 ½ mks
20. Give two signs that indicate that a cow has died of anthrax. (1mk)
    - Absence of rigor mortis/no stiffness
    - Dark blood oozes from natural body opening
    - Excessively blown stomach/underside bloating
    - Blood does not clot
      ½ x 2 = 1mk
21. Why is it raddling essential in sheep management. (1mk)
    - For identification purpose i.e identify males/females which have been tupped
    - Show fertile sows/rams
      1 x 1 = 1mk

SECTION B (20 MARKS)
Answer all the questions in this section in the spaces provided.

22.

(a) If the maize meal contains 60% digestable crude protein (DCP) and Fish contains (64% DCP, calculate the amount of each feed stuff in Kilogrammes required to prepare 200kg of chickmash containing 18% DCP. (4mks)

(a) Maize meal 6% DCP — 46% parts of maize



Fish meal 64% — 12% parts of fish √1mk

58 totals parts

Maize meal = 46/58 x 200kg = 158.6kg √ 1mk

Fish meal = 12/58 x 200kg = 41.4kg √ 1mk

Total 4mks

(b) Name two other feed ingredients which should be added to the chickmash to make it a balanced diet. (2mks)

- Vitamins
- Mineral elements/salts

1 x 2 = 2mks

23. The figure below is a pig with some body paints. Study it and answer the questions that follow.

(i) A farmer wants to select a breeding stock. State the three physical qualities the farmer should asses in order to select a pig. (3mks)

- Strong legs
- Number of teats atleast 12 teats
- Straight and strong backline
- Body confirmation

1 x 3 = 3mks

b) Study the illustration below of a hard flow foundation in a farm structure.

i) Name the parts labeled Rand T (2mks)

R – damp proof course (PVC)

T – Hard core

1 x 2 = 2mks

ii) State three advantages of concrete floor. (3mks)
- Durable
- Fire proof
- Easy to clean
- Attractive

1 x 3 = 3mks

24. The diagram below represents some farm tools

(a) State the use of each tool on the farm. (4mks)

S – Harvest grass and certain cereals crop e.g finger millet and rice and cutting back pyrethrum 1 x 1 = 1mk

U – Cutting hard branches during pruning of coffee 1 x 1 = 1mk

V – Smoothening mortar in walls and floors during construction 1 x 1 = 1mk

Y – Applying screed on the floor;000 1 x 1 = 1mk

Applying mortar between the blocks, bricks/stones in walls during construction.

(b) Explain two maintenance practices that should be carried out on the teeth of tools in the diagram. (2mks)

Clean it after use to remove dirt sharpen it regularly to improve efficiency

1 x 2 = 2mks

SECTION C

Answer any two questions in this section in the spaces provided after question 26.

25.

(a) Explain the factors considered when culling livestock. (5mks)
- Poor health
- Old age
- Physical deformities
- Hereditary defects
- Infertility
- Poor mothering ability
- Poor quality products
- Bad temperament
- To avoid inbreeding

1 x 5 = 5mks

(b) Explain five factors considered when siting a cattle dip. (5mks)
- Availability of water/source of water
- Adequate space
- The No. of animals in an area
- Accessibility to allow movement of animals
- Stability of the soil-must be suitable soils for construction/type of soil

1 x 5 = 5mks

(c) Give four conditions necessary for artificial incubation. (4mks)

- Ambient temperature between 37.5 – 39.4^{0}C warmth
- Temperature must be specific
- Relative humidity of 60% fresh air circulation aeration
- Turning of eggs every after 4 hours

1 x 4 = 4mks

(d) Outline the factors a farmer should consider to ensure fast and efficient cultivation by oxen. (6mks)

- The right draught implement
- The right terrain – gentle/flat land
- Level of training of the animal and personel must be properly trained
- Condition of the working implement-must be in the right working condition
- Method of harvesting – must be appropriate
- Body condition/health of the animal-must be health to work
- Working duration – appropriate to age and experience
- Body size of animals for proper harnessing

1 x 6 = 6mks

26.

(a) Describe East Coast Feaver (ECF) under the following sub headings.

(i) Animal attacked – cattle (1mk)

(ii) Causal organism – Theilleriaparva/protozoa (1mk)

(iii) Signs of infection (5mks)

- Swollen lymph nodes
- High temperatue
- Profuse salvation
- Lacrimatin/tears comes out of eyes
- Laboured breathing
- Haermorrage (wounds around the vulva and muzzle)
- Coughing/diarrhoea
- Sight impairment/poor vision

1 x 5 = 5mks

(iv) Control measures (3mks)

- Control ticks (Vectors)
- Fencing to keep away strange animal and confine animals within
- Treating using appropriate drugs

1 x 3 = 3mks

(b) Explain seven factors that affect milk composition in a dairy farming. (7mks)

- Age of the animal-butter fat in milk becomes less as an animal grows older
- Breed differences-different breeds of cattle produce milk with differing % of composition
- Type of food eaten-roughage feeds produce milk with higher fats lactose and protein compared to grains
- Diseases – such as mastitis reduce the lactose composition in milk

- Physiological condition of the animal – sick/extremely emaciated animals register low% of butter fat
- Time of milking – milk produced in the morning has low butterfat
- Season of the year B.F content increase during cold seasons
- Completeness of milking – last drawn milk has 10% B.F more
- Stage of lactation – butter fat is highest at middle phase of lactation period; stating ½
  explanation ½

(c) State the advantages of a four stroke engine over a two stroke engine oil. (3mks)

- Produce high power of heavy duties
- Efficient in fuel and oil utilization
- Perform wide range of operations.
  1 x 3 = 3mks

27.

(a) Describe the feeding practices in artificial rearing of a dairy calf. (10mks)

- Train the calf to feed from the a bucket(bucket feeding)
- Ensure the calf suckless the cow within the first eight hours to get colostrums
- Feed the calf on colostrums for the first 4 – 7 days 1st week
- Introduce the feeding of whole milk or milk substitutes after the fifth day/1st week
- Feed the calf 2 - 3 times per day for the 4 weeks
- Feed the calf on the correct amount of milk up to weaning time
- Provide adequate clean water from third week
- Feed the calf with warm milk at regular intervals
- Introduce palatable dry feeds such as concetratates (calf pellets) or good quality cut grass from the third week
- Provide mineral supplements or licks
- Any change in feeding should be done gradually to avoid nutritional disorder
- Observe hygiene
  1 x 10 = 10mks

(b) Describe the life cycle of a three host tick. (10mks)

- Eggs are laid of the ground which hatch into larvae
- Larvae climbs on the first host where it feeds on blood becomes engorged and falls on the ground to moult
- Fallen larvae moults on the ground into nymph
- Nymph climbs on the second host where it feeds on blood, engorges and falls down to moult
- Fallen nymph moults to adult
- Adult climbs on the 3rd host
- It sucks blood, engorges mates and falls down to lay eggs
  Mark as a whole – until the cycle is broken then stop
  Certify what happens to tick in every host

1 x 10 = 10mks