**MWAKICAN (MJET)**

**END OF TERM 1 EXAM 2016**

**AGRICULTURE FORM THREE**

**MARKING SCHEME**

**PAPER 2**

**SECTION A (30MKS)**

1. (i) Dromendary (1/2 mk)

(ii) Bacterian (1/2 mk)

1. A drenching gun is used for administering liquid drugs through the mouth of an animal; while a bolus gun is used for shooting solid drugs through the mouth of an animal. (2mks)
2. (i) To make them durable

(ii) Reduce replacement cost

(iii) To avoid injuries

(iv) To avoid damage to the tool

(v) To increase efficiency of doing work.

1. (i) Healthy animals grow well and fast enough to reach maturity quickly.

(ii) Healthy animals have along productive life.

(iii) Healthy animals produce quality products.

(iv) Healthy animals will not spread diseases.

(v) Healthy animals reduce production cost / raise the profit margin. (4 x ½ = 2mks)

1. Advantages of castration
2. Controls breeding diseases
3. Controls breeding
4. Controls inbreeding
5. Fasten growth rates. (4 x ½) = 2mks
6. Saluival

Red poll

Sinimental

Brown swiss (2 x ½ mk = 1mk)

1. **Large white Land race**
2. Has abroad and slightly (i) Has a straight snout.

Dished snout. (ii) Has long ears which droop over the

1. Has got upright / erect ears. Face.
2. Skin may have blue spots. (iii) Completely white in colour.
3. Large body (iv) Lean body. (4 x ½ = 2mks)

8 (i) Hormones / stilbestrol

 (ii) Antibiotics

 (iii) Medicants for example coladiostat.

 2 x ½ = 1mk

9.(a)

|  |  |
| --- | --- |
| Ruminants | Non-ruminants |
| 1. Chew cud
2. Have four stomach

Chamber (polygastrics)1. Regurgitate food.
2. Have no ptyalin in saliva.
3. Have alkaline saliva.
4. Most digestion and absorption take place in the rumen.
 | 1. Do not chew cud.
2. Have one stomach

Chambers /monogastrics1. Do not regurgitate food.
2. Have ptyalin in saliva.
3. The saliva is neutral in PH
4. Most digestion and absorption take

Place in the small intestines. |

 4 x ½ = 2mks

(b) (i) Growth, repair and replacement of worn out body tissues.

 (ii) Production of antibodies.

 (iii) Production of digestive enzymes to break food particles.

 (iv) Production of hormones in the body.

1. Production of products such as meat, milk, eggs and wool.
2. Provides energy during starvation.

4 x ½ = 2mks

10 (a) Flushing is the practice of giving extra quality feed to animals in preparation for mating; while steaming up is the practice of giving extra quality feed to an animal during the last weeks of digestion.

 2 X 1 = 2mks

(b) Poor health

 Old age

 Poor production

 Physical deformities

 Hereditary defects

 Infertility

 Poor mothering ability

 Bad temperament

 To avoid inbreeding 4 x ½ = 2mks

11. Chinchilla

 Earlops

 Flemish giant

 New Zealand white

 California white 4 x ½ = 2mks

12. Easy to clean

 Dry and warm

Draught free

Adequate space

Properly lit

Well drained

Well ventilated 6 x ½ = 3mks

13. Vaccination

 Spraying against external parasites

 Identification of the animal

 Administering prophylactic drugs to livestock

 Treating sick animals

 Dehorning

 Pregnancy test

 Artificial insemination

 Taking body temperature

Hoof trimming

Milking 6 x ½ = 3mks

**SECTION B**

14. (a) E - Ovary

 F - Magnum

 G - Isthmus

 H - Uterus / shell gland 4 x ½ = 2mks

(b) F - Albumen

 G - Shell membranes / water/ minerals / vitamins

 H - Shell / shell pigments or colour.

 3 x 1 = 3mks

(c) (i) Fertilization

 (ii) Addition of chalazal (1mk)

(d) 24 – 26 hrs (1mk)

15. (a) A - Rumen

 B - Reticulum

 C - Omasum

 D - Abomasum 4 x ½ = 2mks

 (b) A and D 2 x ½ = 1mk

 (c) (i) Fermentation of food

 (ii) Synthesis of vitamin B complex and vitamin K

 (iii) Synthesis of amino acids from ammonia gas.

1. Breakdown of proteins to peptides, amino acids and ammonia.
2. Breakdown of carbohydrates / cellulose into volatile fatty acids (VFAs) and glycerol.

 2 x 1 = 2mks

16 (a) K - Garden / manure fork

 L - Prunning shears

 M - Sprinkler

 N - Spade 4 x 1 = 4mks

 (b) Uses

 K - Collecting manure and trash

 L - Trimming hedges and shrubs

 M - Distributing water to plants

 N - Scooping soil / sand

(c) K - Replace / repair the broken handle

 - Scrap off dirt from the folks

L - Sharpening the cutting edge

- Tighten the loose nut

- Oil / grease to reduce friction / wear

 2 x 1 = 2mks

**SECTION C**

17 (a) Factors to consider in selecting construction materials.

 (i) Availability of the materials

(ii) Cost of the materials

(iii) Capital availability

1. Suitability of each type of material to the prevailing weather conditions.
2. Durability of the materials.
3. Strength of the materials.
4. Workability of the materials.

6 x 1 = 6mks

(b) (i) The location of the homestead –

 It should be easy to view the structures from all parts of the farm.

 (ii) Accessibility –

 It should be easy to reach the structures from all the parts of the farm.

 (iii) Security –

 The area should be safe from predators, thieves and tresspassers.

(iv) Direction of the prevailing wind -

Should be constructed on the leeward side of the homestead / structures to keep away the foul smells and draught.

 (v) Drainage -

 The area should be free from clamp conditions / water logging.

 (vi) Farmers tastes and preferences -

 The interest of farmer should be taken into consideration.

 (vii) Proximity to amenities -

Distance from the sources of water, electricity, telephone lines should be considered.

1. Topography -

The landscape of the area should allow free drainage of water from the site. (9 x 1 = 9mks)

 (Well explained points)

(c) Importance of farm buildings.

(i) They protect the farmer and livestock from predators.

(ii) They help in the control of livestock diseases and parasites.

(iii) They provide shelter against extreme weather conditions.

(iv) They provide storage of farm produce and other variable inputs.

(v) They increase the efficiency of production in the farm.

 (5 x 1 = 5mks)

18(a) Explain the importance of fencing in the farm.

1. To mark boundaries - The perimeter fence demarcates the farm land from the neighbours to prevent land disputes.
2. For privacy and security – fences keep off wild animals and other intruders.
3. Separate crop land from pastures – To prevent animals from destroying crops.
4. To divide pasture land into paddocks – Paddocking facilitates rotational grazing.
5. Restrict animals movement – This helps to control the spread of parasites and diseases by keeping off stray animals.
6. Isolation of sick animals – sick animals are kept in an isolation unit which is a fenced off area to prevent them from mixing with the rest of the herd.
7. Facilitate controlled breeding – Animals are separated according to sex and age to allow the farmer to decide on when to breed.

(4 x 2 = 8mks)

(b) Procedure followed when constructing a barbed wire fence (8mks)

(i) Clear the fence line.

(ii) Measure and mark the position of the holes with pegs.

(iii) Dig holes for the posts / 4 – 6 apart and 60cm deep.

(iv) Fix the posts in the holes using concrete mixture / firm soil at the base of the post.

(v) Fix the lowest strand of wire about 25 cm from the ground level.

(vi) Stretch the wire with wire strainer and then nail it with fencing staples.

(vii) Use the fire strand of wire to guide in fixing the rest of wires until four strands of wire are fixed.

1. Fix the droppers in position.

(Mark the right procedure)

 8 x 1 = 8mks

(c) (i) Replace / repair broken parts.

 (ii) Tighten loose wires to maintain the tension.

 (iii) Place metal or plastic cover on the post to prevent rotting due to water.

 (iv) Control termites.

 (4 x 1 = 4mks)

19. (a) Effects of parasites in livestock.

 (i) Cause anaemia.

 (ii) Deprive the lost animal of food.

 (iii) Cause injury and damage to animal tissues and organs.

 (iv) Transmit diseases.

(v) Cause irritation

(vi) Cause obstruction to internal organs.

 (b) The life cycle of Taenia solium

(i) Human beings drop tapeworms segments / proglottides together with their faeces.

(ii) Eggs are released from the segments once outside the human body.

(iii) Eggs are picked by pigs when feeding.

1. Eggs hatch into embryos in the intestines of pigs.
2. Embryo penetrate the intestinal wall and enter into the blood stream.
3. Embryo localise in the liver.
4. Embryos are then distributed throughout the body muscles where they become cysts / bladder worms.
5. The bladder worms get into human beings through eating under cooked pork.
6. Once inside human intestines, the cyst’s wall dissolves and the bladder worms attach themselves to the wall of intestines.
7. The bladder worms get into human beings through eating under cooked pork.
8. The adult tapeworm releases segments / proglottides containing fertilized eggs with human faeces.

10 x 1 = 10mks

 (c) Control measures of tapeworm.

(i) Use of prophylactic drugs / dewormers to kill the internal parasites.

(ii) Keep animal houses clean and disinfected / hygiene in animal houses.

(iii) Practice rotational grazing.

(iv) Use of clean feeding and watering equipment.

(v) Use of latrines by farm workers / proper disposal of human excreta.

1. Proper cooking of meat.

4 x 1 = 4mks