**MALIET F4, MARKING SCHEME**

**AGRICULTURE PP2 13/03/2019**

**SECTION A**

1. **Reasons for docking in sheep**
* Facilitate easy mating
* Control accumulation of faeces which attract blow flies.
* Fie uniform distribution of fats.
* To achieve uniformity in appearance

 (1/2 x2= 1mk)

1. **Qualities of a good calf pen**.
* Easy to clean
* Always be dry and warm.
* Have good ventilation and not affected by draught.
* Should house one calf.
* Should be spacious
* Have good drainage
* Have feed and water troughs.

 (1/2x4=2mks)

1. **Outline four characteristics of the Romney marsh sheep breed**
* Wide head with poll covered with wool
* It has a straight back
* It has black hooves
* It has short legs

 (1/2 x4=2mks)

1. **(a) disadvantages of using metals frames for construction**;
* It is heavy to transport
* It is expensive.
* Requires skill to construct/fit.

 (1/2 x4=2mks)

(b**) Reasons for seasoning timber**

 - to prevent insect damage.

 - to avoid fungal infestation and rotting.

- to prevent warping

- make it easy to work on.

- to improve its durability

 (1/2 x3=1 ½)

1. **Reasons for swarming of bees**
* Shortages of food and water.
* Due to outbreak of diseases and parasites.
* Death of queen.
* Unfavorable smell/bad or ad our smell.
* Too much noise.
* Death of brood.

 (½ x2 =1mk)

1. **Methods used to preserve fish**
* Salting
* Sun-drying
* Smoking
* Freezing

 (1/2 x 4)=2mks)

1. a) **A notifiable diseas**e an infectious disease which once noticed must be reported to the authorities/government authorities for the purpose of taking action. (1mk)

**(b) Examples of notifiable diseases**

- Foot and mouth disease

- Rinder pest

- Anthrax

- Rift valley fever

- New Castle

- Avionflue in poultry

- Rabbies

 (1/2 x3 = 1 ½ mks)

1. **State two physical characteristics of the saddleback breed in pigs**

-It has a black body with a white strip over the shoulders (1x1= 1mk)

1. **State two features of heavy poultry breeds**
* Heavy
* Fast growing

 (2x0.5mk=1mk

1. **List two maintenance practices of a wood chisel**
* Sharpening the cutting edge when blunt
* Replacing the broken handle

 (2x0.5mk=1mk)

11. **State four ways of controlling tsetse flies**

(i) bush clearing to control places

 (ii) spraying their hiding places with suitable insecticides

 (iii) use of flytraps with impregnated nets

 (iv) use of sterilizing agents for example , radio isotopes on male flies

 (4x 0.5mk = 2mks)

**12.chacteristics of livestock roughage feedstuff**

 – high fibre content

 - high moisture content

 - low protein content

 - high carbohydrate content

 (4x 0.5mk= 2mks)

**13. Equipment used in handling cattle during agricultural exhibition**

(i) halter

(ii) bull – ring

**14. State the gestation period of the livestock animals given below**

 Rabbit -28-32 days

 Goat – 143-153 days

 ( 2x½ = 1mk)

**15. state four disadvantages of natural mating**

(a) inbreeding is very difficult to be controlled

 (b) transmission of breeding diseases for example brucellosis

 (c) males animals used in breeding require extra feed

 (d) large males animals may injure small female animals

 (e) a lot of semen is wasted

 (f) it is expensive and cumbersome to transport bull

 (any four correct x0.5mk = 2mks)

**16. Give one egg content added to it at magnum during egg formation**

 -Albumen (1x1 = 1mk)

**17.** (i) control of external parasites

 (ii) supply of balance feeds to the chicken

 (iii) regular collection of eggs

 (iv) avoiding overcrowding of chicken

 (4x 0.5mk = 2mks)

**18. (a**) – it is used for cooking

 - it is used as source of light in the farm

 - it may be used in internal combustion engines

 **(b**) – it is not reliable as it depends on wind direction

 - its source of power is small

 - it is not flexible since it is only applied in open places

**19. (a)** (i) artificial egg incubator

 (ii) C – thermometer

 D – warm water

 E- darmp cloth

 (iii) C- checking the temperature

 D- maintains the humidity

 E – assists in maintaining the relative humidity

 (3x1mk each = 3mks)

**(b)** (i) **J** – uterine wall

 **F** – cervix

 **H** – fallopian tube/oviduct

 (3x0.5 =1.5mks)

 (ii) J – where implantation of the zygote occurs

 H – fertilization takes place there.

 (1x2=2mks)

 (iii) - oestrogen

 -progesterone

 -oxytocin

 -prolactin

 -adrenalin

 (3x1 =3mks)

**20**. (a) (i) **V**

 (ii) – uses the lower pick to pick food anddrink water

 -1/3 of the upper beak is cut

 (b) -Debeaker

 - Scissor

 - Hot iron blade

**21**. (a) cross breeding

 (b) to develop a dual purpose breed

 (c) to improve the production of meat

**22. (a)** (i) *Brucella abortus*

 **(ii) symptoms of brucellosis**

* abortion/ pre-mature birth
* infertility /barrenness in animal
* yellowish ,brown, slimy , odourless discharge from the vulva
* retained afterbirth in animal

**(iii) control measures of brucellosis**

* use of artificial insemination
* culling and slaughtering of affected animals
* vaccination of livestock animals
* a blood test to detect the infected animal
* cleanliness must be maintained in animals houses

 **(b) harmful effects of parasites to the livestock animals**

- suck large volume of blood from host animals causing anaemia

- deprive the host animal of food leading to loss of weight, emaciation and low production

- cause injury to the host organs eg the skins

- cause irritation to animals

- internal parasites cause obstructions in the internal organs

- destroy the quality of animal products eg the wools and feathers

 - they cause discomfort , restlessness to livestock animals interfering with the feed intake

- cause stress to animals eg poultry chicken

- delays maturity in livestock animals especially in sheep

- heavy infestation may cause death of the host animal

 (10 x 1mk each = 10mks)

**23 (a) (i) Factors considered in siting the farm structure**

 - availability of water

 - drainage of the area/ slope of the land

- central location/ accessibility

- firm ground

- type of soil (1x3 = 3mks)

**(ii)** **Foot bath** – To wash the feet of the animal

 - to control the foot rot

 **Entrance race** – it allows the animals to enter the dip tank

  **Roof** - it prevents the rain water from diluting the acaricides solution

 -it prevents the sun rays from reaching the acaricides solution causing evaporation **Drainage race**- it allows the dip wash from the animals body to drip off and drains back to the dip tank

 **Jump** – it allows the animals to jump singly into the dip tank

 **Dip tank** – it contains the acaricides solution where the animals are immersed to control the external parasites

**Exit step** – it allows the animals to come out of the dip wash slowly

 **(each part x 1mk each = 7mks)**

**(b)** (i) clear the fence line

 (ii) measure and mark the points on the fence line where holes are to be dug determining the positions of the gates

 (iii) dig holes to a depth of 60cm for the main fence and 75-90cm for the corner and the gates posts

iv) place treated posts in the holes in the upright position

(v) mix concrete of 1:3:5 ratio and place it in the hole. Alternatively put soil and stones in the holes and ram to firm the base

(vi) nail the barbed wire onto the posts with fencing staples while stretching the wire using the wire strainer

(vii)fix the lower strand of wire first , and use it as a guide to fix the next up to the required number **(mark procedurally , 1 mk foe each step correctly written)**

**24 (a)** (i) – the level of production

 -the health status of the animal

 -the age of the animal

 -the type of feed content eg protein or energy giving feeds

 **(3x1mk= 3mks)**

 (ii) (a) healthy milking herd

 (b) clean milking cows

 (c) healthy and clean milkman

 (d) clean milking shed

 (e)clean milking utensils

 (f)milk filtration, cooling and storage

 (g)avoid flavours in milk

 **(0.5 mk for stating and 0.5mk for explanation= 7mks)**

 **(b) digestion of grsass in the rumen**

- Grass is stored temporary in the rumen

-Coarse grass is regurgitated from the rumen for further chewing in the mouth

- Saliva that mixes with the feed creates alkaline/medium suitable for micro-organisms

- Feed undergoes microbial fermentation

- Carbohdrates are broken down into volatile fatty acids (VFAs) which include Acetic, butyric and propionic acids

- Gases like methane, CO2 and H2 are released

-Proteins are broken down to amino acids/peptides and ammonia gas is released.

- Amino acids/non essential amino acids are synthesised from ammonia gas and other non-protein nitrogen by micro-organisms

- Synthesis of vitamin B complex and vitamin K by micro-organisms

- Volatile fatty acids are absorbed through the rumen wall into the bloodstream

-Gases are expelled through belching

**(Each x1 = 10mks)**