**MOKASA AGRICULTURE MARKING SCHEME**

**443/2 – PAPER 2 - 2020**

**SECTION A (30 Marks)**

1 – ***Spraying with appropriate insecticides at the breeding places;***

* Clearing the vegetation/ breeding grounds
* Use of impregnated nets
* Sterilizing the male tsetse flies.

**(4 x ½ = 2mks)**

2 ***Dairy goats***

* Toggenburg
* British alpine
* Saanen
* Anglo – Nubian
* Jamnapari

**(4 x ½ = 2mks)**

3 ***Characteristics of a good vaccine;***

* Easy to administer
* Do not react with other vaccines administered to the animal
* Do not have side effects on the animal
* Produce long lifelong immunity
* Have a long self life.

(4 x ½ = 2mks)

4 ***Advantages of outbreeding;***

* The offspring acquire hybrid vigour or heterosis, which helps to improve the performance of less productive breeds
* Characteristics of the pure breeds are maintained
* The system can be used to upgrade native breeds for increased milk and meat production.
* It is cheaper compared to buying pure breeds

**( 4 x ½ = 2mks)**

5 ***Factors that affect the quality of honey;***

* The presence of impurities
* Source of nectar/food type/ the type of plants from which nectar was collected
* Stage of ripening
* The method of extraction
* The season of the year

**( 4 x ½ = 2mks)**

6 ***Functions of calcium;***

* A component of milk
* Formation of the skeleton and teeth
* Blood clotting
* Nerve functioning/ control milk fever.

**(3 x ½ = 1 ½ mks)**

7 ***Four cattle diseases caused by virus;***

* Rinderpest
* Foot and mouth disease
* Mad cow disease.

**( 4 x ½ = 2mks)**

***8 Functions of the following farm tools and equipment;***

1. Used for checking the verticalness of the building. ( ½ mk)
2. Used to administer liquate drugs in to the back mouth of an animal. ( ½ mk)
3. Used for scooping or lifting seedlings; loosening soil in the nursery bed. ( ½ mk)
4. Pipe wrench is used in holding, tightening and loosening metal pipes and fittings. ( ½ mk)

9 ***Reasons for seasoning timber;***

* To make it resistant to insect attack
* To avoid warping
* To make resistant to weather conditions
* To avoid fungal attack

**( 2 x ½ = 1mk)**

10 **Reasons for culling a breeding boar;**

* To control inbreeding
* To prevent/ control diseases
* Due to old age
* Due to deformities
* Because of injury
* Due to bad temperament
* Loss of libido

**( 4 x ½ = 2 mks)**

1. **Uses of lubrication system in a tractor;**

- Reduce friction between moving parts

* Reduces heat produced by rubbing surfaces/cooling effect
* Acts as cleaning agent
* Prevents rust

**( 3 x ½ = 1 ½ mks)**

12 **Behaviour of chicks which would indicate the temperature of brooder is too high;**

* Chicks move away from the source of heat
* Parting/ opening beaks
* Opening wings/spreading wings
* Making abnormal noise drinking water excessively
* Chicks may lie flat on their bellies.

**( 4 x ½ = 2mks)**

13 Ways of stimulating milk – let down in a dairy cow;

* Washing the udder with warm water
* Allow the calf to suck for a while
* Feeding the cow with dairy meal during milking
* Production of sound associated with milking
* Regular milking time
* Massaging the udder when washing it.

**( 4 x ½ = 2mks)**

14 ***Preventive measures of brucellosis in cattle;***

* Use of artificial insemination
* Cull infected animals
* Vaccinate all young animals
* Avoid direct contact with aborted foetus/after birth
* Observe hygiene/proper disposal of aborted foetus.

**( 4 x ½ = 2mks)**

15 ***conditions that would encourage hens to eat eggs;***

* Calcium deficiency in the birds’ body
* Bright light in the laying nests
* Birds laying on the floor
* Presence of broken, soft shelled eggs
* Prolonged stay of eggs in the laying boxes
* Idleness of birds
* Inadequate feeding

**( 4 x ½ = 2mks)**

16 ***Advantages of hedge fence;***

* Source of firewood
* Source of fodder/mulch
* Act as wind breaker
* Control soil erosion
* Adds beauty to the farm
* Provides security/ privacy/block intruders
* Mark farm boundaries

**(4 x ½ = 2mks)**

**SECTION B (20 Marks)**

17 (a) Liver fluke (1mk)

b) Cattle/Sheep (1mk)

c) Fresh water snail (1mk)

d) Control the intermediate host/fresh water snail

- Draining swampy areas/leveling any depression that may hold water in the pasture

- Burning of the pastures during the dry season.

- Not grazing animals near marshy/water – logged areas.

- Routine drenching of the animals.

( 2 x 1 = 2mks)

18 (a) The parts labeled **E , F** , and **G**.

**E** – Crop (1mk)

**F** – Proventriculous (1mk)

**G** – Gizzard (1mk)

(b) Ways in which the part labeled **G** is adapted to its function;

- It is equipped with tough muscles on each side. The sliding movements of these muscles cause the crushing and grinding of food particles.

- Presence of grit/ sand stones aid in crushing and grinding of food.

1. x 1 = 2mks)

19 a) Implement;

1. Reciprocating mower (1mk)
2. The power take off shaft (PTO shaft) (1mk)
3. For harvesting forage crop , Cutting vegetation when clearing the field. (1mk)
4. – Check loose nuts and bolts and tighten where necessary.

* Keep knife section sharp
* Lubricate the knife parts
* Check knife to ledger plate cups for best cutting
* Keep all the parts tight.

(2 x 1 = 2mks)

20 (a) How the materials for constructing part **Q** and **S** be treated;

* Q – Painted to avoid rust. (1mk)
* S - Smearing with old engine oil, applying insecticide, Charing,

**SECTION C (40 Marks)**

21 (a) The strokes of a four stroke cycle engine;

* **Induction stroke;**

The piston is moved down the cylinder causing the inlet valve to open drawing in fresh supply of petrol vapour and air into the cylinder. (3mks)

* **Compression stroke**

Both the inlet valve and outlet valve are closed, piston moves up the cylinder and the fuel – air mixture is compressed. (3mks)

* **Power stroke**

-A spark is produced at a spark plug, igniting the fuel –air mixture.

* The increased pressure forces the piston down the cylinder.

(3 mks)

* **Exhaust stroke**
* Exhaust valve opens
* Piston moves up the cylinder
* Burned fuel – air mixture expelled.

(3 mks)

b) Physical characteristics of poor layers’

- the comb and wattles are small or shrunken, dry, scaly, pale and cold

- Eyes are dull and pale yellow

- the beak is yellowish in colour

- it has a dry and round vent

- the abdomen is hard and sometimes full

- it is lazy and dull

- it moults early

- the shanks are yellowish

- they go broody or broodiness is common

- it has a small space between the keel and pelvic bones that can only fit 1 – 2 fingers

( 8 Marks)

22(a) Milk fever

1. Animals affected ; Dairy cattle, Goats, (2mks)
2. Symptoms,

* Newly affected animal become nervous
* Animal staggers when walking
* Animal lies down or collapses and cannot stand thereafter
* The muscles twitch
* The animal lies with the head twisted towards the body
* If not treated, the animal gets weaker with the vital body organs failing to work and this leads to death.

( 1 x 5 = 5mrks)

(Iii) Control measures’

* Feed heavy yielding cows with minerals before and after calving
* Inject the attacked animal with soluble calcium salt solution i.e. calcium borogluconate

**( 1 x 2 = 2 mrks)**

1. Calf management practices carried out immediately after birth;

* Ensure the calf is breathing by removing mucus from nostrils
* Cut the umbilical cord and disinfect it to avoid infection
* Clean the calf of mucus if the mother doesn’t lick it
* If the calf is not breathing perform artificial respiration.
* Move the calf to a warm clean pen
* Ensure the calf gets colostrum from the mother, weak calf is supported to suckle the mother.

**( 1 x 6 = 6mrks)**

C) Qualities of eggs for marketing;

- they should be clean

- should be large in size or arranged according to sizes

- should have high candling qualities

- the colour of the eggs should be brown

**( 1 x 4 = 4 mrks)**

1. (a) Harmful effects of parasites in livestock;

* They transmit diseases eg tickborne diseases
* They lower production in livestock
* They damage body organs or tissues
* They lower quality of livestock products
* They cause irritation and discomfort to the host
* They cause anaemia by sucking blood from host
* Increase cost of production when the farmer is trying to control them.
* They feed on their host causing loss of weight and slowing growth rate
* Internal parasites cause blockage of internal organs.

( 1 x 10 = 10 mrks)

b) Functions of five parts of a zero grazing unit;

- Milking area- this the part for milking the animal

- Calf pen – part for keeping the calf

- Food and water area – used for feeding and watering the animals

- Fodder chopping area – part for chopping fodder

- Store – For storing food

- Walking area

- Milk recording room

- A cubicle for the calf

- Manure storage

**( 1 mrk for any correct stated part and 1 mrk for well described function of the part named.**

**( 5 x 2 = 10 mrks)**