**MAGS 2 CYCLE 7**

**AGRICULTURE MARKING SCHEME - 2020**

**SEC. A (30 MARKS)**

1. Bactrian

1 x 1 = ( 1 mk)

1. - Provide shallow cultivation

– Requires more than one person to guide implement and animal

- Slow than tractors

- Less durable

- Animal fall sick reducing work output

* More tedious
* Animal require extra grazing land increasing cost of production

2 x 1 = (2 marks)

1. – Brown ear tick ( *Rhipicephalus appendiculatus)*

- Culex mosquito/Aedes mosquito

- Tsetse fly

-Brown ear tick ( *Rhipicephalus appendiculatus*

4 x ½ = (2 marks)

1. Near source of water

* Topography/Drainage
* Type of soil
* Accessibility to the pond
* Security of fish

4 x ½ = (2 marks)

1. – Rotavator

* mower
* planters
* sprayers
* fertilizer spreaders

2 x ½ (1 mk)

1. – Add weight/mass on harrow/exert more hydraulic force

* Sharpened disc blade
* Use fewer discs/increase space between discs
* Lessen area of disc contact with soil/increase cutting angle of disc

2 x 1 = (2 marks)

1. Coping saw (½ Each )

Inside calipers

Tinsnips

Wire strainer

Tools should be cleaned after use (Any 4 x ½ )

Part like hack-saw blades should be replaced regularly

Handles should be replaced when broken

All moving parts like nuts and wheels should be lubricated regularly to reduce friction

When cutting metal, a coolant oil should be used to increase grip

* Clean after use or dust

1 x 1 (1 mk)

1. – Age

* Incomplete milking
* Stage of lactation
* Mechanical injury on teats/udder
* Poor milking technique
* Poor sanitation

Any 4 x ½ =(2 marks)

1. – Poor layers/producers

* cannibals
* Old chicken
* Combs, wattles & vents become shriveled
* Having dull feathers
* Egg eaters
* Breast bones become hard
* Body and vent changes colour from white to yellow
* Width between pelvic bones becomes narrow 2-3 fingers can’t fit in between

Any 4 x ½ = (2 marks)

1. – Iron sheets are light

* Iron sheets are cheaper
* Iron sheets are easily serviced
* Iron sheets are easy to work with/ Do not require a lot of skilled man power like tiles
* Iron sheets are easily available.

Any 4 x 1 = (4 marks)

1. – Used to restrain the bull

* Used to lead the bull

1 x 1 = (1 mk)

1. a) Carburettor – Atomises fuel

* introduces air and fuel to the engine
* regulates mixing of air and fuel into suitable proportions. (1 x 1 = 1 mk)

b) Spark plug – introduces spark to ignite fuel air mixture in the cylinder

13. Magnesium 1 x ½ = (1/2 mk)

14.– Weighing

* Recording milk
* Straining
* Cooling
* Storing
* Cleaning utensils 3 x ½ (1 ½ mrks)
* Cleaning milking parlour

1. x ½ = (1 ½ marks)

15– Anthrax Mark as a whole

- Black quarter/leg 2 x ½ = (1 mk)

- Vaccine – Blanthrax 1 x ½ = (1/2 mks)

16.– Prolactin – lactogenesis/milk synthesis

* Oxytocin – cause milk let down

2 x 1 = (2 marks)

17.Ants, wax moth, Bee louse, Honey Badger 1 x ½ = (1/2 mk)

**SECTION B (20 MARKS)**

18.(a) Direction of movement

A B C (1 x ½=½mk)

(b) Uses of parts;

A – Hold animals before dipping

* waiting area

B – Clean cattle hooves

* Prevent dip contamination

C – Hold livestock to wait for dip wash to drip

* Draining race (3 x 1=3mks)

(c) Precautions farmer should take for effective dipping

* Proper mixing of dip wash
* Check concentration of dip wash
* Top up dip was at correct level ( 2 x 1=2mks)

(d) Uses of roof

* Reduce evaporation of dip wash
* Prevent dilution of dip was by rain water (2 x 1=2mks)

(e) Methods to control ticks

* Hand picking and kill
* Burn heavily infested pasture to kill them
* Double fencing to starve the ticks
* Use predictor to feed on ticks
* Cultivate heavily infested pasture to control ticks ( 3 x 1=3mks)

19.a) i) X – Pruning knife

Y – Metal float (2 x ½=1mk)

ii) Uses of tools

X – Pruning hard woods such as tea

Y – For spreading screed over the floors or walls (2 x 1=2mks)

iii) Maintenance of tool X

* Clean to remove dirt
* Sharpen to improve efficiency
* Apply old engine oil/paint to prevent rusting
* Fix handle tightly to reduce accidents ( 2 x 1=2mks)

b) Tools used in conjuction with

- cannula

* Syringe
* Mallet
* Star headed screw driver **rej screw driver alone** (4 x ½=2mks)

20i) D – Fallopian tube

F – Cervix

ii) Function of;

C – Produce ova /female gamete

* Produce oestrogen /progesterone hormones

E – Foetus implants and grow ( 2 x 1=2mks)

b) Stage gilt should be mated

8 – 12 months (½mk)

**SECTION C**

21.-**The species of the animal**.Certain species of animals are affected by specific diseases like swine fever for pigs and new castle for poultry.

-**The breed of the animal**. Certain breeds of animals are affected by particular diseases like cancer of the eye for Hereford and solar erythema for large whites.

-**The age of the animal**. Certain ages of animals are easily affected by certain diseases e.g anemia for piglets and lamb dysentery for lambs.

-**Sex of the animal**. Certain diseases are associated to sex of the animal e.g Orchitis for males and vaginitis for females.

-**Color of the animal** . Black colored animals suffer from heat stress than white coloured animals

**( 5 x 1 = 5marks)**

(b)-Burning of the infested pastures in order to kill all the stages of the lifecycle of ticks.

-ploughing the pasture so that the stages of the lifecycle are exposed to sunlight for desiccation or killed by burying deeply.

-Top dressing the pasture with lime or acaridae is also effective in controlling larvae, nymphs and adults

-Fencing the pasture and farm to keep off intruding animals that could be carriers.

-Starving the ticks to death by enhancing rotational grazing. Effective in breaking lifecycles.

-Hand picking the tricks and killing them(deticking).

**( 6 x 1 = 6marks)**

(c) -Age of the animal. Young animals produce higher butterfat content in milk.

-The middle stage of lactation of a cow has higher butterfat content.

- Condition of the animal. Emaciated sick and pregnant animals produce low butterfat content.

-The last drawn milk during milking has higher butterfat content.

-Time of milking. Evening milk has higher butterfat content than morning milk.

-Breed of the animal. Jerseys, Guernsey the Zebu cows have a higher butterfat content than other breeds like freisian

-Season of the year. Cows produce milk with a lower butterfat content during cold season than warm season.

-Cows that feed on roughage produce milk with higher butterfat content than other feeds.

-Cows suffering from disease like mastitis produce milk with a low butterfat content and poorly contaminated.

-Cows under medication with antibiotics produce milk that is poorly constituted.

**( 1 x 9= 9marks)**

**22** (a) (i) -Can work in areas inaccessible areas to a tractor

* Irregularly shaped and small piece of land/stony land
* Its cost is cheap than tractor engine power.
* Used when other sources of power are not available.
* Can be used in are very steep slopes

**( 5 x 1 = 5marks)**

**(**ii)- **Operational differences between a disc and a mouldboard**

|  |  |  |  |
| --- | --- | --- | --- |
| **Disc Plough** | | **Mouldboard Plough** | |
| * 1. | Suitable on field with stones, | * 1. | * Cannot be used on fields with stone, |
|  | roots and stumps. |  | roots or stumps. |
| * 2. | Does not invert the furrow slices | * 2. | * Inverts the furrow slices completely. |
|  | completely. |  |  |
| * 3. | More secondary operations are | * 3. | * Fewer secondary operations are |
|  | necessary after it has been used. |  | needed. |
| * 4. | Cuts at varying points. | * 4. | * Operates at uniform depth. |
| * 5. | Not easily broken by obstacles. | * 5. | * Can easily be broken by obstacles. |
| * 6. | Requires less power to operate. | * 6. | * Requires more power to operate. |

**(2X3 marks) Differences should be on same point at a time**

(c)– Timber – Construction box and top bars

- Corrugated iron sheets – form lid to prevent leakage.

- Nails- for joining parts

- Wire – firming wire loop, for hanging

- Posts – for hanging

- Wood preservatives- coating on wood to preserve from attack by pests and weather conditions.

( **½mk**for mentioning the material, ½ mk for explaining- **5marks**)

(d) –The water pump should be lubricated regularly

- Clean water should be used in the radiator and trash removed from the fins

- All pipes should be fitted tightly to avoid leakage

- Fan belt tension should be checked regularly and if too tight or too loose should be adjusted

- The radiator should be filled with clean water before starting day’s work.

**(5 x 1 = 5 marks)**

23 (a)(i)-Body temperature

-pulse rate/heart beat

-Respiratory rate.

-Level of production

-Appetite and feeding

- Urination and urine

- Defeacation and feaces

- Production level of the animal

**( 4 x 1 = 4marks)**

(ii) –Age of animal

* Le4vel of performance/production
* Physical fitness
* Health. Animals selected must be health
* Body conformation- Animals for breeding should be selected according to their body conformation.
* Temperament or behavior- Some animals within a breed might have bad temperament or undesirable behaviors such as cannibalism and egg eating in the case of poultry.
* Quality of products. Select animals that give products of high quality
* Mothering ability. Animals selected should have a good mothering ability, which are animals with good natural instinct towards their young ones.
* Adaptability. Animals selected should be well adapted to the prevailing climatic conditions.
* Prolificacy. Select animals which are highly prolific, that is animals with an ability to give birth to many offsprings at a time.

**( 9 x 1 = 9marks)**

(b)(i)Cause

*Brucella abortus* **( 1mark)**

(ii)**symptoms**

Spontanous abortion/Premature birth

Infertility in cow while bulls have low libido

-Yellowish brown, slimy, odourless discharge from vulva may occur.

- Retained placenta if abortion occur later in pregnancy

**( 4 x 1 = 4marks)**

(iv) **Control measures**

-Use artificial insemination.

-Slaughtering affected animals and proper disposal of carcass

-Attendant to animals should avoid contact with aborted foetus

-Blood test should be done for all breeding animals to detect infected animals before being culled

-Fencing grazing land to restrict possible intrusion of infected animals from spreading the disease to healthy herd.

**( 2 x 1 = 2marks)**