**441/2**

**AGRICULTURE PAPER 2**

**MARKING SCHEME**

1. ***Two meal goals in Kenya***

(i). Galla

(ii). Boer.

1. ***Function of***

(i)Testes – produce sperms

- produce male hormone – testosterone

(ii). Urethra – part of urinary system / conveys urine

* Expulsion of sperms

1. ***Factors affecting digestibility***

* Chemical composition of feed
* Form in which offered
* The ratio of energy to protein the higher the ratio the lower the digestibility
* Amount of feed already present in the digestive system.

1. ***Factors considered when selecting egg for sale.***

* Cleanliness
* Egg size
* Egg colour
* Candling quality
* Shape of egg
* Smooth without cracks

1. ***Two uses of a gear box in a tractor .***

* Provision of different forward speeds
* Enables reversing
* Allows tractor to stop without switching off the engine

1. ***Differences between out crossing and cross – breeding . (2mrks)***

* Out crossing – mating of unrelated animals within same breed
* Cross – breeding –mating of two animals from different breeds.

1. ***Reason for weighing livestock at weaning (mrk)***

* Determine the amount of food to give
* Determine dosage of medicine
* Determine growth rate
* For selection / culling
* For record keeping

1. ***Four function of vitamins***

* Blood clotting
* Help in muscular activity
* Act as organic solvents in metabolic reactions
* Development of strong bones
* Promote growth
* Protection against diseases ***( 4 x ½ = 2mks)***

1. ***Advantage of wool as construction material (2mrks)***

* Easily available / locally available
* Cheaper than most materials e.g. concrete
* Light to transport
* Requires less skills in use and preparation

1. ***Safety precautions when using electric power (2mrks)***

* Proper installation by qualities personnel
* Do not overload
* Ensure proper current rating according to need
* Avoid contact with naked wires
* Avoid contact with water
* Have appropriate / proper fire extinguishers (not use water / from for extinguishing electrical fires.

1. ***Tractor drawn implements attached to the drawn bar***

* Trailors
* harrows

1. ***Uses of footbath in plunge dip (2mrks)***

* remove mud from hooves
* control foot rot / harden hooves where formalin is added.

1. ***Channels of marketing livestock (2mrks)***

* Local slaughlin houses / Butcheries
* Kenya meat commission
* Livestock marketing Division

1. ***Disadvantages of using hurricane / lanterns to provide heat in a brooder (2mrks)***

* Provide inadequate and irregular heat.
* Risky as paraffin may spill and cause fire

1. ***Four ways of stimulating milk let down in a dairy cow. (2mrks)***

* Washing with warm water
* Familiar noises
* Sucking from calf
* Feeding concentrates
* Presences of milk man
* Presences of making utensils
* Milking at regular times

1. ***Function of additions in silage making (2mrks)***

* Improve carbohydrate level for proper fermentation
* Improve quality / palatability of silage

1. ***Uses of***

* Chipping hammer
* Removing rough stone surfaces / shaping rough stone surface.
* Tin snip – cutting sheet metal
* Router – removing wood to form a groove / make groove smooth.

1. ***(a). identification of***
2. Lice
3. Flea
4. Liver fluke / fasciola SPP.
5. Roundworm / Ascaris SPP

***(b).Differences***

A. and B are External / Ectoparasites

C and D are internal parasites / Endoparasites

***(c).Effective control mellird of C***

* Eradicate water snail / round snail / lymnac SPP
* Deworming / use of Antihelruintics
* Draining marshy areas,

1. ***(a). Farm implement – ox – plough (1/2mrk)***

(b). A- Mould board (2mrks)

B – Share

C – Main beam

(D) – Land – wheel

(E) –Land – side

(c). Function of . (1mrk)

C – Attachment of all parts.

-Adds weight for deeper ploughing`

E – Stabilizes plough against thrust by furrow slices (1mrk)

1. ***(a).Calculation***

8 parts of MG

Calculating for

MG 20%

MG = x 100 = 80kg

WB = x 100 = 20kg

18

parts of WB

parts of WB

2/10 total part

WB 10%

(b). Other methods

* Trial and error

1. ***Stages of four stroke cycle engine***

* G –
* H –
* I –
* J –

***(b) Disadvantages of a four stroke engines (2mrks)***

* Are expensive to buy and maintain
* Their use is limited in areas
* They require skilled personal and support services

***(c) .Function of part K***

* Produce spark for ignition

**SECTION C**

1. ***(a). Importance of keeping livestock healthy. (8mrks)***

* Healthy animals grow well and fast reaching maturity quickly
* Healthy animals have longer economic and productive life
* Healthy animals give maximum production
* Healthy animals give good quality products and hence high market prices
* Healthy animals will not spread diseases to other animals and human beings
* Healthy animals are economical and easy to keep as the farmer spends less money on disease treatment hence reduced cost of production
* Have high fertility rate and produce more and faster
* Command high market prices / value eg beef animals

***(b). Daily maintenance and servicing of a tractor. (10mrks)***

* Check engine oil using dip stick and adjust accordingly
* Check fuel level
* Check water level in radiator
* Check level of electrolyte in the battery
* Check for loose nuts and bolts and tighten
* Grease moving parts,
* Check tyre pressure
* Check and remove sediments in sediment owl
* Check fan belt tension and adjust accordingly
* Check the breaks and maintain break fluid level on recommended

***(c). Maintenance practices in a fish pond (2mrks)***

* Fertilize fish pond – to increase planktons

(food)for fish

* Remove silt – to maintain high oxygen concentrations in pond for survival of fish
* Liming – remove acidity from organic wastes
* Repair cracks in pond - to maintain water level

1. ***Structural requirements in construction of a calf pen. (10mrks)***

* Concrete floor – for easy clearing
* Spacious – to allow exercise and placement of equipment
* Singly – crawl spread of parasites

-preventing licking one and their to control formation of hair balls

* Proper lighting – Allow enough light
* For vitamin D synthesis
* Proper drainage – prevent dampness which predispose to infections.
* Drought free - to prevent cold winds which predispose to pneumonia
* Leak proof - Avoid damp conditions / wetness which predispose to navel ill; pneumonia
* Warm + dry – to avoid infections
* Well ventilated – Allow proper air circulation in structure
* Lockable / secure – provide security against predators / thieves

***(b). Mastitis disease under***

(i). Two causal organisms

* Streptococcus agalatiac (1mrk)
* Staphylococcus aurens (1mrk)

(ii). Predisposing factors (8mrks)

* Sex
* Age – older lactating animals more prove
* Stage of lactation period – majorly during early /
* Under attachment – milk is good medicine for bacterial growth
* Mechanical injury - leads to injection
* Poor sanitation / hygiene – leads to infection
* Poor milking technique – Destroy sprinkler muscle of teal
* Hereditary factors

1. ***(a). Factors to consider while sitting farm structures (10mrks)***

* Location of homestead – centrally placed
* Accessibility
* Drainage
* Direction of preventing wind
* Relationship between structures
* Topography
* Proximity of amenities e.g. water / electricity
* Government policy

***(b).Training a calf to drink milk from a bucket (5mrks)***

* Put clean milk in bucket
* Milk should be at body temperature / warm
* Place index finger into the calf’s mouth, the calf starts sucking
* Ensure nails are short and clean
* Lower fingers slowly until it is submerged in the milk as the calf sucks .This allows the calf to drink milk
* Slowly withdraw the finger which calf is sucking
* Repeat the above procedure until calf can take milk on its own from bucket.

***(c). Why prefer dric plough over mould board plough.***

* Can easily be used on field with obstacles / rolls over obstacles / does not break.
* Requires less power to pull when operating
* Cuts at varying depths while poughing
* Wears out move slowly (drics) as compared to the share in mould board.
* May be the only one available