**AGRICULTURE**

**MARKING SCHEME – 443/2**

**SECTION A**

1. Large white

(1/2mk)

2.˗ Parasites.

 ˗ Chemicals

. ˗ Poor feeding/Nutrition.

 ˗ Physical injuries. 2 x ½ = (1Mk

3.-Nectar

-Pollen

-Propolis

-Water

4.Reasons for two month dry period are;

* To enable the cow to provide nutrients to the developing foetus.
* Cow is able to build up body reserves.
* To enable the cow to develop the mammary tissue.
* To enable the cow to replenish minerals and vitamins lost in the previous lactation.

 (1/2 x 2 = 1 mk)

5.Ways of controlling egg eating in poultry

* Collect eggs frequently and regularly from the laying boxes.
* Make laying boxes dark.
* Feed birds on a balanced feed to prevent mineral deficiency and harden shells.
* Debeak perpetual egg- eaters.
* Keep birds busy by hanging green leaves in the house.
* Scatter grains in the litter to enable the birds to scratch them.

(1/2 x 4 = 2 mks)

6.(a) causes of mik fever

* Lack / low levels of calcium in blood stream.

(1/2mk)

 (b) Control

* Feed heavy yielding cows with mineral before and after calving.
* Treat with calcium borogluconate injection (1/2 mk)
1. -If the ground is hard.

-If there are many obstacles in the field.

-If the soil is sticky or heavy.

-If there is little organic matter to be turned into the soil.

-Where a rougher seed bed is required/ where land is liable to erosion.

(1/2 x 3 = 11/2 mks)

8.(a) Disadvantages of using metal frames for construction;

* It is heavy to transport.
* It is expensive.
* Requires skill to construct / fit.

(1/2 x 2 = 1 mk)

 (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 x 3 = 11/2 mks)

9 - Degree of excitement

  -The age of the animal

 - Sex of the animal

 - Physiological status of the animal

 -Activity of the animal (4 x ½ = 2 marks)

.

10.Qualities of colostrum;

* It is rich in proteins, vitamins and minerals.
* It is easily digestable.
* It contains antibodies which pass immunity from mother to the calf.
* Has laxative effect which clears the first faeces (dung) from calf’s digestive system.

(1/2 x 4 = 2 mks)

11 . Sahiwal

. Red poll

. Simental

12.Reasons for swarming of bees.

* Shortages of food and water.
* Due to outbreak of diseases and parasites.
* Death of queen.
* Unfavorable smell / bad or odour smell.
* Too much noise.
* Death of brood
* ( ½ x 4 = 2mks)
1. -To produce well developed young animals with high birth weight

  -To stimulate the alveolar cells of the udder in order to increase milk yields after calving.

  -To help the cow build up enough body reserves

  -To give the cow enough energy during parturition

 -To accustom the cow on feeds which will be given during milking (4 x ½ = 2 marks

14. **Causes of high mortality in piglets**

* Overlying by the mother.
* Lack of breathing due to failure to remove mucus around nostrils at birth.
* Infection leading to scouring
* Chilling effects
* Lack of colostrum after they are born.

(1/2 x 2 = 1 mk)

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

(b) Examples of notifiable diseases

- foot and mouth disease

- Rinder pest

- Anthrax

- Rift valley fever

- New castle

- Avion flue in poultry

- Rabbies

(1/2 x 4 = 2 mks)

16. -It does not eradicate other stages of development of the parasite.

-It does not destroy the parasites in the intermediate hosts

-It does not destroy parasites in pastures, water and forage.

(1/2 x 3 = 11/2 mks)

17.˗ Oval in shape

 ˗Brown in colour /white in colour

 ˗ Smooth shelled ˗ Should be clean

 ˗ Should have an average weight of 57 grammes (4 × ½ =2mks)

18.˗ leghorns

˗ ancorna

 ˗ minorca

˗ sykes 4 x ½ = 2mks

SECTION B

19(a) Diagram J (1mk)

(b) Breech presentation (1mk)

(c ) Signs of parturation

* The udder enlarges / full and distended udder.
* The ligament on each side of the tail relax
* The vulva enlarges
* Clear mucus discharge from the vulva
* Thick milky fluid from the teats
* A water bag appears and burst, just before calving

(1 x 3 = 3 mks)

20.a)Name tools A, B and C and state the correct use of each tool.

|  |  |  |
| --- | --- | --- |
| Tool | Identity | Function |
| A | Sickle | -Harvesting small grains and cereal crops eg rice, wheat and millet-Also ideal for cutting grass. |
| B | Pruning saw | -Pruning or cutting branches eg coffee, citrus and ornamental plants. |
| C | Jack plane | Smoothing and cleaning up surface of wood to obtain a fine even surface. |

 1x3=3mks

-Knobs or handles should be replaced when broken.

-Check and replace any worn out parts of a plane.

-Plane iron and cap iron require replacement when worn-out.

-Cutting edge of the plane iron should be sharpened on an oilstone when blunt.

-The plane should be laid on its side at the work bench when not in use.

-After work the plane iron is drawn back and the plane placed on its side in the tool rack.

1x2=2mks

21. (i) Poultry fold structure – (1/2 mk)

 (ii) U – A wheel (1/2mk)

 (iii) Maintenance

* Repair broken parts.
* Move the folds to a fresh ground to reduce build up of disease and to keep hygiene
* Move it to a fresh ground to provide fresh grass and avoid accumulation of droppings and to get fresh grass.

( 1 x 1 = 1mk)

22. a)Which diagram shows the proper way of drawing milk. (1mk)

*-Diagram N.*

b)How long should it take to milk a cow from the start to the end of milking. (1mk)

*-Five to eight minutes.*

c)How would a milkman ensure that no milk remains in the udder at the end of milking?

 (1mk)

*-By massaging the udder and stripping out milk from the teats.*

d) Give **two** practices carried out **on milk** immediately after milking. (2mks)

*-Weighing.*

*-Filtering/ sieving.*

*-Cooling/ storage.*

23.a)Identify the activity carried out using the set-up. (1mk)

*-Egg candling.*

b)State **two** abnormalities in eggs that can be detected using the set-up above. (1mk)

*-Hair cracks on the shell.*

*-Double yolk/ deformed yolk/ broken yolk*

*-Absence of yolk.*

*-Blood spots/ meat spots.*

*-Dead embryo.*

*-Inappropriate size and location of the air cell/air space.*

c)How can a farmer improve the following? (1/2 mk)

1. Hardness of egg shells.

*-Feeding calcium/soluble grit/ oyster shells to the birds.*

Yellowness of the egg yolk. (1/2 mk)

1.

*-Providing green vegetation/ green vegetables to the birds.*

24.Describe fish management under the following sub headings

* 1. -Procedure for establishing a pond. 10mks

-Select a suitable site

-Clear the land of all the vegetation

-Mark the area

-Dig out the soil from the floor ensuring upper side of pond is 0.5m deep and lower one 1.5m deep

- Dig a core or a trench 0.5m wide and lower than the general level of the pond bottom and fill it clay or concrete to prevent seepage

 -Construct the inlet furrow, spillway and outlet

- Plant grass on the walls

-Fence around

* 1. Stocking the pond. 3mks

Obtain fingerlings from a recognized hatchery

-put them in oxygenated water in container

- Lower the container in the pond water and allow the fingerlings to swim out freely

-Ensure the right stocking rate

Management practices that would ensure maximum harvest of fish from the pond. 5mks

-Supplementary feeding with cheap food such as ground nut cakes, kitchen waste. Chicken manure

- Give just enough food to avoid rotting polluting the water

-Ensure gradual change in routine practices

-Add fertilizer or manure to increase the plant volume

-Control pests.disease and predator

-Avoid damaging fingerlings and young fish during harvesting

* 1. Methods of preserving fish. 2mks

-Freezing-

-Salting

-Sun drying

 -Smoking

25.(a) a) State the functions of any **six** parts of a plunge dip. (6mks)

|  |  |
| --- | --- |
| ***Part***  | ***Function*** |
| ***Animal holding yard-****Has a concrete floor.* | *-Holding animals before dipping.**-Have stones to ensure that mud from the hooves is removed before getting into the dip wash.* |
| ***Foot bath*** | *-Washing livestock feet to remove mud.**-Contains copper II sulphate solution that helps in controlling foot rot.* |
| ***The jump-*** *This is a narrow entrance to the dip tank with short steps.* | *-Allows animals to jump singly into the dip tank.* |
| ***Dip tank-****It should measure 5m long at the bottom8m at the top and 1.6m deep at the highest level of acaricide.*  | *-Holds the dip wash.* |
| *Rump or staircase* | *-Enables animals to climb out of the dip tank.* |
| *Draining race* | *-Holds livestock after dipping to let the dip wash drain back to the plunge dip.* |
| *Drying yard* | *-Holds animals for a while before being released to the pastures.* |
| *Silt trap outlet* | *-Traps mud and dung before the dip wash flows back to the dip tank* |
| *Dip tank shelter(roof)* | *-Lower the evaporation rate of the dip wash.**-Avoid the dilution of the dip wash by rain water.* |
| *Water tank* | *-Stores water used for dipping purposes.* |
| *Waste pit* | *-Used as a damping site for sediments from the dip tank.* |

1. b) **Factor considered when selecting breeding stock**

Age – select young animals

Level of performance – select animals with high performance

Physical fitness – select animals which are free from physical defects

Health – select animals which are healthy.

Body conformation – animals with proper body conformation selected.

Behaviour/ temperament – animals with bad behaviour such as cannibalism not selected.

Quality of products – select animals with high quality products.

Mothering ability –select those with good mothering ability.

Adaptability – select those well adapted to prevailing climatic condition in the area.

Prolificacy – selected animals should have ability to give birth to many off springs.

c) Explain **five** mechanical methods of controlling ticks. (10mks)

1. *Burning the infested pastures destroys a large number of eggs, larvae, nymphs and adults.*
2. *Interfering with or altering the tick’s environment in the following ways:*

 *-Ploughing pasture land to expose the eggs to suns heat for desiccation or by burring*

 *them deeply.*

 *-Top dressing pastures using lime or dressing using an acaricide.*

1. *Fencing off the pasture land and farm combined with regular use of acaricides.*
2. *Starving the ticks to death by keeping the animals away from infested pastures through rotational grazing.*
3. *Hand picking the ticks from livestock and killing them (de-ticking*

26. a) State **five** advantages of embryo transplant. (5mks)

*-It is possible to implant embryo from a high quality female to less valuable female and hence improve the performance of the offspring.*

*-It stimulates milk production in a female that was not ready to produce milk.*

*-A highly productive female can be spread over a large area to benefit many farmers.*

*-It is easier to transport embryos in test tubes than the whole animal.*

*-Embryos can be stored for long periods awaiting availability of a recipient female.*

b) Describe coccidiosis disease under the following sub- headings.

1. Animals attacked (2mks)

*Calves, poultry, lambs and young rabbits.*

1. Causal organism (1mk)

*Coccidia of the Eimeria spp*

1. Symptoms (4mks)

*-Diarrhoea which may be whitish.*

*-Dysentery or blood in the dung.*

*-Birds have ruffled feathers, dull with drooping wings.*

*-Animals become emaciated*

*-Sudden death in birds, rabbits and kids.*

1. Control measures (3mks)

*-Use of coccidiostats.*

*-Observing hygiene.*

*-Isolation in cattle.*

*-overcrowding in a poultry house should be avoided.*

c) A ration containing 20% DCP for growing chicks is to be obtained by mixing ground maize containing 10% DCP and fishmeal containing 50% DCP. Calculate the amount of each feedstuff in kilograms required to prepare 200kg of the feed. (5mks)

