**OPENER EXAM**

**FORM FOUR AGRICULTURE**

**TERM 1 2023**

**TIME: 1 1/2 HOURS**

**MARKING SCHEME**

Answer all the questions in the spaces provided. (50marks)

1. Define the term caponisation (1mk)

* **Practice of rendering the male birds sterile**

2. List six routes through which pathogens can enter the body of an animal. (3mks)

* **Oral ( mouth), broken skin ( wounds), nasal, ocular ( eyes), anal, ears, reproductive organs, umbilical cord**

3. State two methods of controlling Rinderpest disease in cattle. (2mks)

* + **Routine vaccination**
  + **Slaughtering all infected animals**
  + **Impose quarantine**
  + **Treatment of wounds**

4. A dairy farmer is required to prepare 200 kg of dairy meal containing 20% Digestible Crude

Protein (D.C.P.). Using the Pearson's Square Method, calculate the quantity of soya bean (40% D.C.P.) and rice (16% D.C.P.) the farmer requires for the dairy meal. (5 marks)

20%

soya bean

04 parts

2 4 parts in total

Soya bean40% DCP

40% DCP

Rice

20 parts

Rice 16% DCP

16% DCP

**Rice - 20/24 x 100 = 83.3 kg**

**Soya bean - 4/24 x 100 = 16.7 kg**

5. State four predisposing factors to the occurrence of mastitis in dairy cattle (4mks)

* **Wounds on the udder/ teats**
* **High milk production**
* **Very old cows**
* **Unhygienic handling of the cow**
* **Poor udder placement/ pendulous udder**
* **Incomplete milking**
* **Genetic factors**
* **Early and late lactation period**
* **Poor milking technique**

6. Name the causal agents for each of the following disease (2mks)

i) Coccidiosis

**Protozoa/ coccidia/ Eimeria species**

ii) Black quarter

**Bacterium/ clostridium spp/ clostridium chauvei**

7. i) State two predisposing factors of foot rot in sheep. (2mks)

* **Overgrown cracked hooves**
* **Damp environment/ poor hygiene**
* **Injury on hooves**

ii)Give three symptoms of anaplasmosis disease. (3mks)

* **Anaemia**
* **Fever**
* **Constipation**
* **Lack of appetite/ anorexia**
* **Inability to move**
* **Reduced milk production**
* **Animal becomes aggressive**

8. Give four measures that can control egg eating by hens in a deep litter system (4mks)

* **Ensure laying nets are dimly lit**
* **Provide adequate laying nests**
* **Debeak perpetual egg eaters**
* **Collect eggs regularly and frequently**
* **Ensure birds get a balanced diet**
* **Keep birds busy by hanging green vegetation in the house/ scatter grains on the floor.**

9. a) State four observations on the behaviour of chicks which would indicate that the temperature of a brooder is too high. (4mks)

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

1. 10. Diagrams Q and R below illustrate livestock deficiency. Study the diagrams and answer the questions that follow.

a). Identify the disease in cattle with the symptoms shown in Q. (1 mk)

* **Milk fever (parturient paresis)**

b). Name the deficient nutrients in Q and R (2mks)

Q

* **low levels of calcium and phosphorous in lactating cow**

R

* **manganese deficiency in diet**

c). List two symptoms of the disease illustrated in Q above. (2mks)

* **Paralysis / inability to move**
* **Stiffness of the body**
* **Muscular twitching / tremor**
* **Head turned backward**

11.State five disadvantages of using live fences on a farm (5mks)

* **May take long to establish into an effective fence**
* **Not effective in sub – dividing land into paddocks / occupies a large space**
* **May harbor pests**
* **May create hiding places for thieves, wild animals and vermin**
* **May be labour demanding to trim regularly**
* **May have shading effects on crops / compete for nutrients / water/light**
* **May leave gaps which allow animals and thieves to pass through**
* **Some may injure both livestock and the farmer**

12. Below is a diagram showing maize comb affected by a crop disease

(a). Identify the crop disease (1 mk)

* **Maize smut**

(b). State three control measures for the crop disease. (3mks)

* **Ensure field hygiene**
* **Use of certified seeds**
* **Use of resistant varieties**
* **Rogueing**
* **Crop rotation**

(c). Name the category in which the crop disease is classified. (1mk)

* **Fungal disease**

13. Name three forms of horticulture in Kenya (3mks)

* **Pomology**
* **Floriculture**
* **Floriculture**

14. State **two** roles of worker bees in a colony. (2mks)

* **Scouting for a new home**
* **collect nectar/water/gum/propolis/pollen**
* **Make honey combs**
* **Protect the colony**
* **Clean the hive**
* **Make honey and bees wax**
* **Seal the cracks and crevices.**
* **Kills the drones after mating the queen**