**AGRICULTURE**

**FORM 4 -2021**

**MARKING SCHEME**

1. **State** any two **tests that should be carried out to determine the quality of fresh eggs. (1mk)**

* Candling
* Physical observation
* Floatation
* Shaking lightly.

1. **List four factors that should be considered when grading eggs for marketing**. (2mks)

* Size, weight or volume of egg
* Colour
* Shell quality e.g. rough or broken
* Shape of egg

1. **What is candling? (1mk)**

* Examining an egg for abnormalities by looking at it against a strong source of light.

1. **Describe how to candle an egg (3mks)**

* Put a strong light under the egg and look at it contents
* Look at the external and internal contents
* If abnormalities are seen discord the egg

1. **Name any four main poultry rearing systems (2mks)**

* Free range
* Fold system
* Deep litter
* Battery cage system

**6. Name the parts labelled B, C, D and F**

**B (½ mk)**

Inner membrane

**C (½ mk)**

Outer membrane

**D (½ mk)**

Albumen

**F (½ mk)**

Chalazae

1. **State four Signs of Broodiness in Poultry (2mks)**

* Tendency to sit on the eggs after laying
* Number of eggs laid are few
* Plucking of feathers from the abdomen/breast region
* Produces a characteristic sound and becomes aggressive

1. **Give four disadvantages of Natural Incubation (2mks)**

* Only few chicks can be hatched at a time by one hen
* Egg production is reduced when the birds go broody.
* It’s only possible with breeds that go broody.
* The farmer cannot plan when to incubate.
* Diseases and parasites can easily be transmitted to the chicks from the hen if it is infected.

1. **Explain 3 conditions necessary for Artificial Incubation (6mks)**

* *Temperature:* Temperature should be maintained at 37.5oC – 39.4oC. Lower or higher temperature would kill the developing embryo.
* *Fresh Air /Ventilation:* There should be adequate fresh air circulating in the incubator. The fresh air is required by the developing embryos.
* *Relative Humidity:* It should be about 60%. If it is too low, the embryos may lose moisture and die.
* *Egg Turning:*This helps to avoid the germinal disc sticking onto the egg shell leading to the death of the embryo.

1. **State four observations on the behavior 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

**11.The diagram below shows a type of a farm gate. Study the diagram and answer the questions that follow.**

a**) Identify the type of gate shown (1 mk)**

Barbed wire gate

**b) Name the parts labeled C, D and E. (3 mks)**

**C -**Gate post/King post/strainer

**D** – Wire

**E**– Dropper.

**c) State one function of the part labeled F. (1mk)**

**-** Support the gate post

- To ensure the barbet remains tout.

**ii) State two functions of the gate illustrated above. (2mks)**

* Prevent movement of farm animals outside
* Keep away livestock from outside.
* Used as entrance into/exit from the farm.

1. **Give three reasons why honey harvesting at night is not encouraged. (11/2mks)**

* To avoid bush fires
* Because one may not distinguish between honey combs and brood combs
* Loss damage to combs
* Little contamination of honey
* To avoid killing bees

13. **Highlight five ways through which can pests be controlled on the farm (2 1/2mks)**

- By use of chemical e.g pesticides

- Early planting of crops

- Field hygiene e.g destruction of affected crop residues

- Use of trap crops, trap cropping

- Close season

- Crop rotation

- Growing resistant varieties

- Trapping and killing pest.

14.**State five uses of a crush (2 1/2mks**

* Hand spraying or hand dressing to control ticks
* Drenching or deworming against internal parasites
* Artificial insemination
* Applying identification marks
* Taking temperature
* Pregnancy diagnosis
* Milking
* Dehorning
* Castration

15.**Name**

**a) Diseases of bees. (2mks)**

* Acarive disease
* American Foul brood disease

b) **Give four examples of pests that affect bees (2mks)**

* Safari ants
* Bee lose
* Private wasps
* Wax moth
* Birds
* Honey badger
* Beetles
* Robber bees

16.**What is hybrid vigour? (1/2mk)**

* The increased ability and performance of the offspring above the average of the two unrelated parents/ increased performance as a result of crossing two superior but unrelated breeds

17.**Discuss Foot rot disease under appropriate sub-headings**

a) **Causal Organism (1mk)**

* A bacterium / *fusiformis spp*

b) **Predisposing factors (2mks)**

* wet/muddy environment
* cracked hooves due to overgrowth

**c) Symptoms (3mks)**

* Lameness/ inability to walk
* Selling of affected feet
* Wound and ulcers/ pus/ foul smelling in affected feet
* Anorexia/ loss of appetite
* Loss of weight/ emaciation

1. **Control (3mks)**

* Trim hooves regularly
* Keep grazing land free from sharp objects
* Avoid grazing sheep in swampy areas
* Apply feet bath using a disinfectant e.g. copper sulphate solution
* Isolate sick ones from healthy ones
* Treat affected sheep to avoid spread