

AGRICULTURE

FORM 4

Answer all questions

1. Define egg candling as used in poultry production (1mk)

Method of examining the internal conditions of an egg for abnormalities by looking at it against a strong light in a dark room

2. State four conditions necessary for artificial incubation (2mks)

Temperature

Fresh air/ ventilation

Relative humidity

Egg turning

3. Highlight any five advantages of battery cage system in poultry production (5mks)

Higher egg production

Accurate egg records can be kept

Cannibalism and egg eating is minimized

Clean eggs

System can be mechanized

No food and water contamination

No bullying during feeding

Many birds can be kept in a small space

4. State any two causes of stress in poultry and for each give a control measures (2mks)

Sudden change in routine; enhance gradual routine change programme

Sudden noise i.e from tractors ; build poultry house away from road or where people pass

Lack of feed and water; provides enough feed and water

Infestation of diseases and parasites; control parasites and diseases

5. State the different ways of controlling cannibalism among layers in deep litter system (4mks)

Keeping the birds easy

Keeping the birds easy

Ensure poultry house is dimly lit

Control external parasites

Isolating and treating birds with injuries

Debeaking

Provider a balanced ration

Cull cannibals

6. What qualities should eggs meant for incubation meet in poultry production?

(3mks)

Medium size

Free from cracks

Oval shaped

Fresh

Clean with open pores

Smooth shells

Fertilised

7. a) What is colostrum(1/2mk)

It is the thick, yellow milk secreted by mammary glands during the first week after parturition

b) Give four qualities of colostrum that make it suitable for new born calves (2mks)

Has a laxative effect

Highly nutritious

It has many antibodies

Highly digestible

Highly palatable

c) State the components of artificial colostrum (2mks)

Fresh egg

Half litre of warm water

Teaspoonful of cod liver oil

Tablespoonful of castor oil

8. State the characteristics of clean and high quality milk(2mks)

Free from disease causing organisms

Has no hair, dirt or dust

Has good flavor

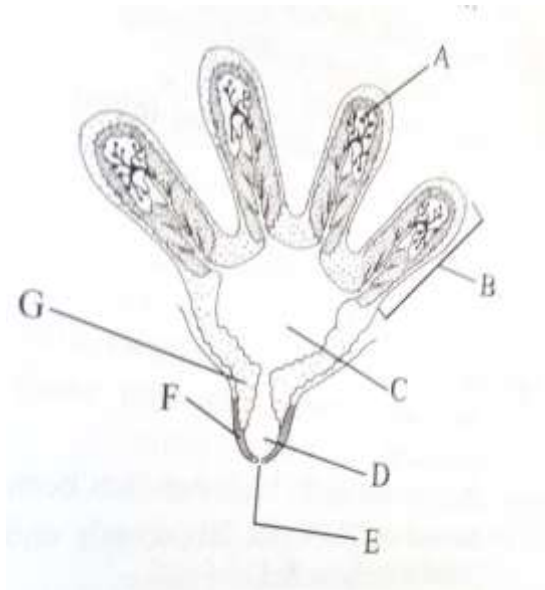
High chemical composition

High keeping quality

9. State four factors that determine the quality of hay (2mks)

- Storage conditions
- Forage species used
- Weather conditions during drying
- Level of additives
- Presence of foreign materials in hay
- Stage of cutting the forage
- Length of drying period
- Leaf; stem ratio
- Degree of damage during handling

10. The diagram below shows the structure of the udder, study it and answer the questions that follow



- a) State the parts labeled A, B, C, D, E, F (3mks)**
- A- Alveolus
 - B- Lobe
 - C- Gland Cistern
 - D- Teat Cistern
 - E- Teat orifice
 - F- Teat sphincter muscle
- b) In which of the labeled parts does secretion take place (1mk)**
- A
- c) Name the two hormones that control milk secretion (1mk)**
- Oestrogen

Prolactin

d) For how long should milking process take? (1mk)

5-8 minutes

e) Give a reason for your answer in (d) above (1mk)

Because this is the duration of the effect of hormone oxytocin

11. State two precautions observed in harvesting of tea (2mks)

Use woven baskets

Avoid compacting tea leaves

Spread plucked tea under shade

Take plucked tea to factory on the same day

Pluck two leaves and a bud

12. State two ways of weed control in rice production (1mk)

Flooding

Uprooting

Use of herbicides

13. Name three methods of conserving silage(1½mks)

Silage

Hay

Standing forage

14. State any four bacterial diseases affecting livestock (2mks)

Anthrax

Blackquater

Mastitis

Brucellosis

Foot rot

15. Explain five requirements of a good calf pen (5mks)

Cleanliness- concrete floors easy to clean to prevent contamination

Dryness and warmth- Dry litter to be changed when wet to prevent infection by pneumonia

Adequate space- To allow exercise

Proper lighting- To enhance synthesis of vitamin D

Proper drainage to prevent dampness

Draughts free- construct solid walls; prevent cold winds which encourage infection

Proper ventilation for fresh air circulation

Single housing- prevent licking each other which encourage formation of balls in their rumen and infection with parasites

16. a) Define layering in crop production (1mk)

This is the practice of inducing a plant to produce roots while still attached to the mother plant

c) Name four methods of layering (2mks)

Tip layering

Trench

Aerial/ marcotting

Compound layering

17. A dairy farmer wanted to prepare 1000kg of a calf ration containing 20% DCP. The feedstuffs available were maize (10% DCP) and Sunflower (35% DCP). Using Pearson Square method, calculate the amount of each of the rearing ration (3mks)

Check square drawn and labeled

Amount of Maize = $15/25 * 1000 = 600$ kg

Amount of sunflower = $10/25 * 1000 = 400$ kg