



**AGRICULTURE FORM 4  
PAPER 2  
TRIAL 2, 2019  
MARKING SCHEME**

1. Non-chemical methods to control ticks
  - Burn infested pasture
  - Hand pick and kill
  - Rotational grazing
  - Double fencing
  - Restrict animal movement (zero grazing) (4 x ½=2mks)
2. Management practices on broody hen
  - Provide drinking water adlip
  - Provide balanced diet
  - Dust with insecticide to control parasites
  - Give hen chance to exercise ( 2 x 1=2mks)
3. Characteristics of good fish pond
  - Gentle slopping
  - Reliable water source
  - Area with no cracks/anthills
  - Clay soil which is poorly drained
  - Secure from predators /thieves
  - Site should be accessible (4 x ½=2mks)
4. Characteristics of beef breeds

- They are blocky
- They have strong short legs
- Bodies are well fleshed
- They have small udder
- They have thick neck

( 4 x ½=2mks)

5. Calf pen to control diseases

- Well ventilated
- Well lit
- Easy to clean
- Free from draught
- Spacious
- Lack proof
- Well drained

6. a) A dry cow therapy – practice of applying mastitis antibiotic in teat canal in cow that is being dried off. (1mk)

b) Dry cow therapy done last 2 months of gestation (1mk)

7. Structures to handle livestock

- Crush
- Calf pens
- Fences
- Milking shed
- Cattle shed

(4 x ½=2mks)

8. Respiratory disorder

- Difficult breathing
- Coughing
- Snoring
- Sneezing
- Running nose

(4 x ½=2mks)

9. Characteristics of poor layers

- Hard/stiff abdomen
- Full/well fleshed abdomen

- Small space between kneel and pelvic bone allow less than 2 fingers ( 2 x 1=2mks)

10. Mothering ability is ability of mother to care for young ones while prolificacy is ability of mother to produce many young ones at once. (Mark as a whole) ( 2 x 1=2mks)

11. Factors leading to female cow fail to conceive

- Poor nutrition
- Poor timing of services
- Infertile cow/bull ( 2 x 1=2mks)

12. Reason for culling dairy cattle

- Poor health
- Poor quality products
- Old age
- Wild temperament
- Low production (4 x ½=2mks)

13. Reasons for doing Agriculture as a discipline

- Provide skills in Agriculture and practices
- It is a career subject
- Creates self-employment and self-reliance in food
- Agriculture promote environmental conservation
- Agriculture promote cohesion in diverse culture
- Agriculture promote school to take part in Agricultural practices eg young farmers (4 x ½=2mks)

14. Tools use to lay concrete block

- Plumb bob/plumb line
- Mason's trowel
- Spirit level
- Wood float (4 x ½=2mks)

15. Factors pre-disposing animal to diseases

- Sex
- Colour
- Age
- Physiological conditions sickness/pregnancy/emaciation/lactating

- Physical injuries (4 x ½=2mks)

**SECTION B**

16. i) Direction of movement

A → B → C (1 x ½=½mk)

ii) Uses of parts;

A – Hold animals before dipping

- waiting area

B – Clean cattle hooves

- Prevent dip contamination

C – Hold livestock to wait for dip wash to drip

- Draining race (3 x 1=3mks)

iii) Precautions farmer should take for effective dipping

- Proper mixing of dip wash
- Check concentration of dip wash
- Top up dip was at correct level (2 x 1=2mks)

iv) Uses of roof

- Reduce evaporation of dip wash
- Prevent dilution of dip was by rain water (2 x 1=2mks)

b) Methods to control ticks

- Hand picking and kill
- Burn heavily infested pasture to kill them
- Double fencing to starve the ticks
- Use predictor to feed on ticks
- Cultivate heavily infested pasture to control ticks (3 x 1=3mks)

17. a) i) X – Sickle

Y – Metal float (2 x ½=1mk)

ii) Uses of tools

X – Used to harvest grass small grains and cereal crops

Y – Used for smooth finishing of concrete work (2 x 1=2mks)

iii) Maintenance of tool X

- Clean to remove dirt
- Sharpen to improve efficiency
- Apply old engine oil/paint to prevent rusting
- Fix handle tightly to reduce accidents ( 2 x 1=2mks)

b) Tools used in conjunction with

- Troca cannula
- Hand drill –Bits
- Leading stick Bull ring
- Mallet – Wood chisel (4 x ½=2mks)

18. i) D – Fallopian tube

F – Cervix

ii) Function of;

C – Produce ova

- Produce hormones

E – Embryo /Foetus grow ( 2 x 1=2mks)

b) Stage gilt should be mated

8 – 12 months (½mk)

### SECTION C

19. a) Features of ideal calf pen

- Concrete/slatted floor – To maintain cleanliness
- Adequate space- Large enough for exercises and feeding 1.8m x 1.5m
- Well lit – For calf to synthesis vitamin D
- Single housing – Prevent calf from leaning each other to form hair balls on rumen
- Proper drainage – To avoid dampness
- Draught free- Windward side should be solid to prevent cold winds.
- Leak proof – To ensure the floor is dry
- Well ventilated – For free air circulation

(Any six ideal features and explanation -6mks)

b) Feeding practices

- Ensure calf suckle within 8 hours to get colostrum

- Feed calf with colostrum for first four days
- Feed calf 2-3 times a day for the first 4 weeks
- Feed correct amount of milk upto weaning.
- Introduce feeding of whole milk after 4<sup>th</sup> day
- Feed call with whole milk at regular intervals
- Provide adequate clean water 3<sup>rd</sup> week
- Introduce palatable dry feeds and concentrates 3<sup>rd</sup> week
- For any changes in feed should be done gradually to avoid disorders.
- Clean equipment's should be used for feeding calves
- Calf should be trained to suck milk from the bucket. ( 8 x 1=8mks)

c) Uses of water

- Make body cells turgid
- Responsible for transportation in the body
- It is component of body fluidseg blood
- Help excretion of body wastes
- Help to regulate body temperatures
- Used in various bio-chemical reactions in the body
- Form animal products eg milk ( 6 x 1=6mks)

20. a) i) Cause organisms

- Bacteria /Streptococcal mastitis /Staphylococcal mastitis

ii) Pre-disposing factors

- Old aged animal
- Beginning and end of lactation
- Large pendulus /loose under /injured
- Incomplete milking
- Mechanical injuries
- Poor milking techniques (4 x 1=4mks)

iii) Symptoms

- Swollen udder
- Pvs /blood/clot/watery milk
- Death of infected quarter

- Milk has salty taste and fine clots or flakes on fore milk ( 3 x 1=3mks)

iv) Control measures

- Use correct milking techniques
- Use strip cup to test infections
- Avoid teat injuries
- Treat open wounds on teats
- Use separate udder cloth for each animal.
- Infuse antibiotic into teat canal during drying off.

- Maintain cleanliness and use disinfectants ( 6 x 1=6mks)

b) Factors considered while culling

- Old age- Old animals are low producers
- Low levels of performance animals with low level production should be culled.
- Unhealthy animals-Animals which fall sick frequently should be culled
- Poor mothering ability – Animals with poor instinct's should be culled
- Body conformation- Dairy cow which is blocky should be culled
- Physical defects animals with poor physical fitness should be culled ie limping mono eyed etc

21. a) Artificial rearing of chicks up to end of breeding

- Ensure brooder corner are rounded
- Provide enough brooding space according to number
- Clean and disinfect the brooder
- Maintain proper range of temperature
- First week temperature should be 22-35°C
- Maintain proper ventilation by adjusting the opening
- Provide dim light
- Provide water adlip
- Control parasites
- Sick children should be culled.
- Keep proper records
- De-beak 8-10 days before the end of brooding

( 10 x 1=10mks)

b) Types of fences

- Live fence
- Wire fence
- Barbed wire fence
- Plain wire fence
- Wooden wire fence

( 3 x 1-3mks)

c) [Procedure of establishing wire fence

- Clear fence line
- Measure and mark points 4 -6cm
- Dig holes – 60cm and 75-90cm for corner posts
- Place treated posts in upright position
- Mix concrete 1:3:5 into the hole and firm the base
- Nail barbed wire into the post
- Fix the lower strand first which is used to guide the fixing of next wires. (7 x 1=7mks)