KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

ALLIANCE BOYS HIGH SCHOOL
AGRICULTURE
PAPER 2
MARKING SCHEME

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ALLIANCE BOYS HIGH SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016
AGRICULTURE
Paper 2 / 443/2
MARKING SCHEME

1. **Four precautions observed when working with workshop tools**
   - Tools left in safe place after use
   - Tools used for the correct job
   - Maintained and serviced always
   - Handle correctly when in use
   - Use safety devices first Aid

   (½ x 4 = 2mks)
2. **Other good qualities of jersey breed over Fiesian**
   - Hardy / withsand high temperatures
   - Needs less food
   - Excellent grazer on fairly poor pasture ½ x 2 = 1mk
3. **Factors that influence rate of respiration of farm animals**
   - Body size
   - Amount of exercise
   - Degree of excitement
   - Ambient / environmental temp ½ x 4 = 2mks
4. **Feeding characteristics of goats that make them less vulnerable to internal parasites.**
   - Browse on a wide variety of bitter leaves
   - Do not graze from ground where they can pick eggs of parasites (½ x 2 = 1mk)
5. **Factors considered when formulating livestock ration**
   - Body weight / size
   - Available feeds
   - Nutrient composition of feed stuffs available
   - Cost of feeds
   - Ingredient available
   - Level of production of animals
   - Age / stage of growth
   - Type of production eg broiler ½ x 4 = 2mks
6. **Difference between inbreeding and out crossing**
   - Inbreeding is mating closely related animals whereas out crossing is mating animals within the same breed but not related 1 x 2 = 2mk

   (mark as a whole)
7. **Reasons for giving milk to kids using artificial methods.**
   - Mother dead
   - Mother rejects the kid
   - Mother is a dairy goat
   - Mother does not have enough milk / does not produce milk ½ x 3 = 1 ½ mk
8. **Reasons for damp prove coarse (PVC)**
   - Prevent moisture rising up the wall
   - Prevent coldness from ascending ½ x 2 = 1mk
9. **Signs of Anthrax death in cows**
   - Absence of rigor mortis / no stiffness of joints
   - Dark watery blood oozing from natural openings
   - Excessively blown stomach
   - Blood does not clot ½ x 2 = 1mk

10. Abnormalities of eggs
- Blood sport
- Meat spot
- Double yolk ½ x 3 = 1 ½ mks

11. **Pre-milking practices in a dairy herd**
- Restrain cow in a crush
- Assemble milking equipments
- Provide dairy meal feed
- Wash udder with warm water / dry udder
- Test presence of mastitis using strip cup ½ x 4 = 2mks

12. Functions of a carburetor
- Mix air and petrol fuel
- Atomizes liquid fuel into spray form / tiny droplets
- Measure right amount air fuel and introduces into petrol engine ½ x 3 = 1 ½ mk

13. (a) **The hormone concerned with milk synthesis**
- Prolactine hormone ½ x 3 = 1 ½ mks

(b) **Factors that make a lactating cow withhold milk**
- Poor milking technique
- Presence of strangers
- Inflicting pain to the animal
- Absence of the calf
- Change of routine (milkman) ½ x 3 = 1 ½ mk

14. **Two implements connected to power take off**
- Sprayer
- Rolavator
- Mowers
- Chaff cutters
- Planters
- Fertilizer spreader ½ x 2 = 1mk

15. **Function of lubrication system in a tractor**
- Increases efficiency of machines / reduce tear and wear caused by friction
- Reduce heat created by rubbing surface
- Acts as a cleaning agent of dust
- Prevent rusting of stationary machines ½ x 4 = 2mks

16. Function of drones in bee hives
- Fertilize the queen during nuptial flight
- Keep the hive cool by flapping their wide wings at a high speed ½ x 2 = 1mk

17. **Problems associated with lambing**
- Malpresentation of foetus
- Retained after birth
- Prolonged labour pains ½ x 3 = 1 ½ mks

18. Factors that determine the amount of feeds given to an animal
- Body size
- Physiological conditions of animal
- Age of the animal
- Level of production
- Previous food already eaten by the animal ½ x 4 = 2mks

19. Differences between strategic treatment and tactical treatment

<u>Strategic treatment</u>

- Giving animals drugs regularly each year with purpose of reducing risk of infection or contamination of internal parasites eg worms

<u>Tactical treatment</u>

- Giving animal drugs during the year to avoid outbreak of internal parasites when climatic and

Nutritional conditions become abnormal.
1 x 2 = 2mks

SECTION B (20 MARKS)

20. (a) Identity of parts labeled

M – Pistone
N – Crankshaft
P – Differrential axle ½ x 3 = 1 ½ mks

(b) Functions of Q – Gear box

- Transmits/breaks power from the engine to the selected gear
- Stops the tractor while engine is running
- For gradual acceleration from rest position
- For gradual engagement of the engine power to the rear wheels

3 x 1 = 3mks

21. (a) Method of extraction

- Gushing and straining ½ x 1 = ½ mk

(b) Quality of honey

- Method of extraction
- Stage of maturity / time of harvesting
- Amount of smoke used
- Presence of impurities
- Type of plants from which nectar is collected ½ x 4 = 2mks

22. (a) Identify

X – wood chisel
Y – cold chisel ½ x 2 = 1mk

(b) Parts labeled

D – cutting edge
E – bevel edge blade
F – shoulder
G - head
½ x 4 = 2mks

(c) Tool used in sharpening

- Oil stone ½ x 1 = ½ mk

23. (a) Parts labeled

R – prostrate gland
S – seminal vesicle
T – sperm duct
W – scrotum ½ x 4 = 2mks

(b) Functions of parts labeled

R – Produce fluid that neutralize acidic medium of urine
S – Produce semen that transport and nourish sperms
T – Store the sperms
W – Make sperms ½ x 4 = 2mks

(c) Functions of part labeled W

- Enclose testis
- extract and contract to regulate temperature for spermatogenesis ½ x 2 = 1mk

24. (a) Management practice

- debeaking ½ x 1 = ½ mk

(b) Reasons why management is done

- Egg eating
- Cannibalism ½ x 2 = 1mk

(c) Tool used in the practice

- Debeaker
- knife
- Hot iron
- Scissors ½ x 1 = ½ mk

25. (a) Livestock practice

- Ear notching ½ x 1 = ½ mk

(b) Reasons for the practices

- Facilitate culling
- Ease in record keeping
- Ease feeding
- Facilitate disease control
- Facilitate selection and breeding ½ x 2 = 1mk

(c) Individual number

4 + 3 = 7 (left ear)

Litter number

27 + 9 + 3 + 81 + 1 = 122 ½ x 2 = 1mk

26. (a) Management practices in beef management

(i) Forage conservation; as silage or hay used during time of scarcity

(ii) Paddocking; - achieve rotational grazing to conserve and maximize use of pasture without wastage.

(iii) Irrigation of pasture; - Increase yield during drought

(iv) Selective destocking; - To reduce number of animals during drought

(v) Construction of dam/boreholes; - supply constant supply of water

(vi) Provision of supplements;- Supply of deficient nutrients/elements

(vii) Growing of drought resistant;- pasture species; to maintain continuous supply

(viii) Reseeding pasture;- Done at beginning of rains to ensure maximum yield

Stating ½ x 5 = 2 ½

Explanation ½ x 5 = 2 ½

(b) Factors considered when siting a cattle dip

i) Slope – gentle slope for ease drainage

ii) Accessibility – central incase its communal

iii) Direction of prevailing – located away in direction of wind

iv) Away from water sources – away to avoid pollution

v) Space – Enough space to construct a collection of animals awaiting to be dipped

vi) Soil type – prevent erosion and seepage of dip wash

vii) Source of water – to till dip wash and wash utensils

Stating ½ x 5 = 2 ½

Explanation ½ x 5 = 2 ½

(c) Routine management practices of piglets

- Proper disposal of placenta after birth
- Cut umbilical cord with sterilized scapel
- Removal of needle teeth/ teeth clipping
- Keep piglets in warm /creep area
- Weigh piglets regularly; 24 hours after birth

- Feed piglets on colostrums
- Iron supplementation – intra-masculation injection
- Vaccination against diseases
- Creep feeding
- Identification marks – ear notching
- Dehorning/drenching to control internal worms
- Tail cutting
- Castration of male piglets 1 x 10 = 10

27. (a) Foot and mouth

i) Causal organism

Virus; Enterovirus A, C & D 1 x 1 = 1

ii) Mode of transmission

- Contaminated litter, machinery, seel
- Injected saliva
- Seeds
- Vaccines

iii) Symptoms of attack

- Profuse salivation
- Wounds/Blisters in mouth, nuzzle and between hooves
- Emmaciation
- High fever/rise in temperature
- Reduction in milk production 1 x 4 = 4mks

iv) Control measures

- Vaccination every six months
- Quarantine
- Slaughter affected animals
- Isolation of farm animals from wildlife
- Strict hygiene 1 x 4 = 4mks

(b) Importance of keeping livestock healthy

i) Longer lifespan i.e economic life
ii) Maximum production in terms of quantity / more draught power
iii) Quality product; fetch high market price
iv) High fertility; reproduce faster and many offspring
v) Economic to keep – less money is spend on diseases
vi) Do not spread disease – not source of injection to man and other livestock
factor 1 x 5 = 5
Explanation 1 x 5 = 5

28. (a) Establishing a fish pond

(i) site selection

- Suitable topograph/ gently sloping
- Availability of water
-Correct soil type/clay

ii)
- Clear the land
- Clear all the vegetation around the place

iii)
- mark the site
- measure required dimension
- put pegs
- mark exit and inlet channels

iv) Digging the pond
- Dig separate top soil and deep soil
- Upper side 0.5m deep and deep side 1.7m deep
- Use concrete on floor to prevent seepage

v) Construction of the dykes
- Compact wall around pond/ reinforce the deep end with stones/blanks of timber
Step 1 x 5 = 5
Description = 1 x 5 = 5

(b) Life cycle of three host tick

- Eggs on underground harch into larva
- Larva climb 1st host suck blood, engorge drop to the ground
- On the ground larva moult into nymph and climb 2nd host suck blood engorge and drop
- On the ground nymph mount into adult climb 3rd host suck engorge male and drop on the ground adult lay egg and cycle continues. 1 x 7 = 7

(c) Factors that affect digestability of food

- Chemical composition of food
- Ratio of energy to protein
- Species of animal
- Food already in the digestive system
- Form in which food given to animal
- Fibre composition of the seed