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**KENYA NATIONAL EXAMINATION COUNCIL**  
**REVISION MOCK EXAMS 2016**  
**TOP NATIONAL SCHOOLS**

**MARANDA SCHOOL**  
**AGRICULTURE**  
**PAPER 2**  
**MARKING SCHEME**

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# **MARANDA SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016**

## **PAPER 2**

### **MARKING SCHEME**

#### **SECTION A: (30 Marks)**

1. Name the hormone that is concerned with milk synthesis (1mk)
  - Oxytocin
2. State three factors that make a lactating cow to withhold milk during milking (1½mk)
  - Poor milking technique
  - Presence of strangers
  - Inflicting pain to the animal
  - Absence of the calf
  - Change of routine/ milkman
3. Distinguish between crutching and ringing on sheep production. (1 mk)
  - Crutching is the removal/ clipping of wool around the reproductive system of the ewe while ringing is the cutting of wool round the penis sheath of the ram to facilitate mating  
1x1=1mk mark as a whole
4. State four reasons why goats are suitably adapted to marginal areas. (2 mks)
  - Maintain weight gain even in dry season
  - Feed on variety of shrubs
  - Adaptable to high temperature
  - Thin hair to reduce heat stress
  - Walk for long distance
  - Feed on low quality grasses
  - Small body/ low feed requirement (½x4=2mks)
5. Name two methods used in identifying goats (2mks)
  - Ear tagging
  - Ear notching
6. State four factors that determine the daily feed requirements of an animal (2 mks)
  - Body size
  - Age
  - Activity
  - Level of production (2x ½= 1mk)
7. Name a tool used for removal of gases which cause bloat in ruminant animals. (1mk)
  - a) Trocar and canula (1x1) N/B reject trocar or canula alone
  - b) State the use of a ring spanner. (1 mk)  
Opening and loosening specific sizes of bolts and nuts.
8. Outline four reasons for steaming up a gestating cow (2mks)
  - Hastens foetus growth and development
  - It helps in accumulation of the body reservoirs for more milk production in the following lactation period
  - Assists in the formation of colostrums for the calf
  - Accumulation of body reserves gives energy to the cow during parturition
  - Provides nutrients for the cow and calf for healthy and strong calf at birth
9. Large white has broad snout and slightly dished while Land race has straight snout ✓
  - ii) Large white has upright ears with Land race drooping ears ✓ 1x2=2mks
10. What are the secondary host of the following livestock parasite.

- i) Taenia solium- pig, sheep or cattle (½ mk)  
 ii) Liver fluke Fresh water snail
11. State two guns used in agriculture (1 mk)  
 - Bolous gun  
 - Drenching gun/Dosing gun.
12. Give three factors a farmer should consider when selecting garden tools for cultivation (1 ½ mk)  
 - Soil type /hardness of the soil  
 - Cost of the tool  
 - Capital  
 - Desired depth of tillage  
 - Nature of the field (2x1=1½ mks)
13. State any four causes of stress in a flock of lay (2 mks)  
 - Overcrowding  
 - Pest infestation/ disease outbreak  
 - Sudden change of routine e.g. feeds  
 - Imbalanced diet  
 - Extreme temperatures  
 - Lack of feeds and water  
 - Too much handling
14. Give four conditions under which a farmer would use an ox-plough instead of a tractor power for seed bed preparation (2 mks)  
 - Where land is not accessible by a tractor  
 - Irregular shaped pieces of land  
 - Where the cost of hiring a tractor is high  
 - Where tractor for hiring are not available – very steep slopes (4x1=4mks)
- 15.a) Give three functions of worker bees in the hive (1 ½mk)  
 - Caring the larvae/newly emerged larvae  
 - Foraging i.e. collection of nectar pollen and propolis  
 - Comb building  
 - Hive cleaning  
 - Water collection  
 - Guards the hive (2x1=2 mks)
16. Name two species of trees used in agro-forestry that can be utilized as livestock feed. (2mks)  
 - Calliadra  
 - Leucaenia
17. A part from bush clearing and spraying list other two methods 7 used in controlling tsetse flies (1 mk)  
 - Sterilizing the male  
 - Use of trap nets
18. Give four advantages of creep feeding of beef calves. (2 mks)  
 - Highly nutritious  
 - Highly palatable  
 - Easy to digest
19. State one function of each of the following parts in chicken digestion (1 ½mks)  
 i) Crop  
 - Stores food temporarily  
 - Moistens the food  
 ii) Proventriculus  
 Acts as the true stomach

iii) Gizzard crushes and grinds food

### **SECTION B**

20. A Inlet pipe  
    B Dam crest /Dyke (  $\frac{1}{2}$  x4=2mks)  
    C Spill away  
    D Outlet pipe
- b) Repair dyke
- clean pond and remove foreign materials
  - plant grass where necessary
  - Remove undesirable vegetation (1x3=3)
  - Remove silt
21. a) Insulate floor preventing heat loss
- Absorbs moisture avoiding dampness (  $\frac{1}{2}$  x2=1
  - b) Wood shavings, saw dust, straw, Rice husks  $\frac{1}{2}$  x2=1
  - c) Reflect radiated heat back to concentrate within brooder
  - Prevent chicks from straying far from heat source (1x1=1mk)
  - d) Advantages of natural brooding
  - Little Labour required
  - Little skill required (1x2=2 mks)
  - Less /No costs involved
22. Spraying procedure
- Start with back line
  - Then sides in a zigzag manner
  - Spray belly upto for flanks
  - Spray the udder
  - Then sides of hindlegs
  - Raise tail and spray between hind legs
  - Then tail upto the tip
  - Spray the neck shoulders to brisket foreleg
  - Spray head
  - Lastly inside of ears  $\frac{1}{2}$  x10=5
- N/B Procedure must be followed
23. i) Disc plough✓ 1mk  
    ii) part Function
- Depth control wheel
  - stabilize plough (  $\frac{1}{2}$  )
  - Rear/furrow wheel  $\frac{1}{2}$  mk
  - control side thrust /control the depth
  - Disc  $\frac{1}{2}$  mk
  - cut and invert soil  $\frac{1}{2}$  mk
- iii) Maintenance practices
- Tighten loose bolt &nuts
  - Replace /repair worn out parts
  - Grease /Lubricate moving parts
  - Clean after use
  - Proper storage  $\frac{1}{2}$  x4=2mks
  - Painting

### **SECTION C (40MARKS)**

**Answer Any Two Questions From This Section On The Spaces Provided**

- a) Difference between two and four stroke engines (14 mark)

Four stroke	Two stroke
<ul style="list-style-type: none"> <li>- Requires more power</li> <li>- Cycle completed in four strokes</li> <li>With two Revolutions of crankshaft</li> <li>- Has valves</li> <li>- No ports</li> <li>- Expensive and difficult to maintain</li> <li>- Uses more fuel</li> <li>- Used to do heavy work</li> <li>- Long life span</li> <li>- Cooled by water</li> <li>- Suitable in flat areas</li> </ul>	<ul style="list-style-type: none"> <li>- Require less power</li> <li>- Cycle completed in two strokes with one complete Revolution of crankshaft</li> <li>- No valves</li> <li>- Has ports</li> <li>- Cheap and easy to maintain</li> <li>- Uses less fuel</li> <li>- Used to carry out small operations</li> <li>- Short life span</li> <li>- Cooled by air</li> <li>- Suitable in both flat and steep areas</li> </ul> <p>7 x 2=14 mark as a whole</p>

b) State the advantages and disadvantages of animal power (6 marks)

Advantages

- Require no skill
- Cheaper to buy animals
- Work out put is high compared to man power
- Can work in areas where tractors would not
- They are better on a small area than tractors

Disadvantages

- They need a bigger portion for grazing
- Are slower than tractors
- Can damage crops when used for weeding
- They may get sick thus reducing work out put

25.a) Preparation starts 7-10 days before farrowing

- clean and disinfect the farrowing pen
- Introduce warm bedding with farrowing crate
- Drench the pig to control internal parasite
- Use clean bedding material
- Reduce sow's ration a day to farrowing
- During farrowing ensure piglet are breathing
- Ensure they suckle colostrum within 6-12 hrs
- Disinfect naval cord
- Remove after birth to prevent sow from eating it
- Bring sow to pen 3 days to farrowing
- - Feed sow with bran (1x12=12marks)

b) Management practices for good health

- provide balanced ration to increase disease resistance
- select healthy breeding stock
- cull animals susceptible to certain diseases
- use appropriate breeding methods to avoid disease transmission
- provide proper housing e.g calf pens to avoid diseases.
- maintain high level of hygiene
- isolate or confine sick animals from healthy ones
- Treat sick animals
- impose quarantine incase of out breaks of notifiable diseases
- use prophylactic drugs e.g dewormers
- carry out regular vaccination
- control vectors such as ticks
- slaughter & dispose properly affected animal if cannot be cured. 1x8=8mks

26. a) Mention five precautions taken when using work shop tools 5mks

- Tools should be put in a safer place
- Use the correct tool for the correct job
- Tools should be maintained in correct working condition
- The tools should be handled correctly
- Use safety devices like fire extinguishers

b) Give five general characteristics of dairy cattle breeds 5 mks

- Have straight top line
- Well set hind quarters
- Large well developed udder
- prominent milk vein
- Lean bodies with little flesh
- Have large stomach capacity
- Are docile with mild temperament

c) State and explain the predisposing factors of livestock diseases 10mks

- Age-some diseases are found in certain age groups
- Sex-e.g. orchitis for males and virginities for female animals
- Colour-animal with unpigmented skin with photo dynamic diseases
- Hygiene of surrounding – unhygienic are source of infection.
- Breed/species-some diseases are specific e.g. new castle with poultry and swine fever with pigs
- Production level-e.g. milk fever with high producing animals
- Change in weather/climate/environmental conditions may lead to diseases like pneumonia.
- Injury e.g. on teat can lead to mastitis. 5x2=10mks
- Soil type / hardness of the soil
- Cost of the tool
- Availability of the tool Capital
- Desired depth of tillage
  - Nature of the field ( 2 x 1 = 2mks)

27. Give four conditions under which a farmer would use an ox- plough instead of a tractor power for seed bed preparation (2mk)

- where land is not accessible by a tractor
- Irregular shaped pieces of land
- Where the cost of hiring a tractor is high
- Where tractors for hiring are not available –very steep slopes (4x1=4mks)

28. a) Give two functions of worker bees in the hive (1 mk)

- Caring the larvae/ newly emerged larvae
- Foraging i.e. collection of nectar pollen and propolis
- Comb building
- Hive cleaning
- Receiving food from field home bees
- Control hive temperatures via fanning the wings
- Water collection
- Guards the hive (2x1=2mks)

29. Name two species of trees used in agro- forestry that can be utilized as livestock (2 mk)

-calliandra

-leucaenia

30. Apart from bush clearing and spraying list other two methods used ,in controlling

tsetse flies (1mk)

-sterilizing the male

-spraying bushes

-use of trap nets

31. Give four advantages of creep feeding of beef calves (2mks)

-Highly nutritious

- Highly palatable

-Easy to digest

32. State one function of the following parts in chicken digestion (1½ mks)

i)Crop

Stores food temporarily

Moistens the food

ii) Proventriculus

acts as the true stomach

(iii) Gizzard crushes and grinds food

31. A- inlet pipe

B - Dam crest / Dyke ½x4=2mk

C - Spillway

D - Outlet pip

b) Repair dyke

Clean pond and remove foreign