KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

KAPSABET BOYS HIGH SCHOOL
AGRICULTURE
PAPER 2
MARKING SCHEME

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KAPSABET BOYS HIGH SCHOOL KCSE TRIAL AND PRACTICE EXAM 2016

PAPER 2

MARKING SCHEME

1. **Reasons for docking**
   - For uniform distribution of fats
   - Prevents blow fly infection
   - Easy mating 2 x ½ = 1mk
2. Bacterian (1mk)
3. Provides warmth
   Absorbs moisture ½ x 2 = 1mk
4. **Advantages of using stones as construction materials**
   - Stones are durable
   - Free from decay
   - Locally available
   - They are cheap
   - Structures made of stones are easy to clean using water. ½ x 4 = 2mks
5. **Methods of stocking a bee hive**
   - Using a catcher box
   - Using a swarm net
   - Placing a hive in a permanent place 1 x 3 = 3mks
6. **Ways of administering vaccines**
   - By injection
   - Orally through the mouth
   - By inhalation through the nostril
   - Through cloaca i.e in poultry 1x4 = 4mks
7. Jersey's milk is richer in butter fat than Fresians (1mk)
8. **Functions of proteins**
   - Growth, repair and replacement of worn out tissues
   - Production of antibodies
   - Production of digestive enzymes
   - Production of certain enzymes.
   - Production of such products like meat, milk, eggs and wool. 1 x 4 = 4mks
9. (i) Trochar
   (ii) bit 1 x2-2mks
10. Flushing – The practice of feeding breeding animals with extra nutritious feeds before and after servicing.
    Steaming up – The practice of giving an animal extra nutritious feeds towards the end of gestation period. (2mks)
11. **Work of the drones**
    - Fertilize the queen
    - Ventilate the hive ½ x 2 = 1mk
12. (i) Proper drainage – Slightly raised
    Slatted floor.
    (ii) Free from draught – Wind ward side made solid. √ ½ mk
13. **Reason for teeth chipping**
    To avoid injuries to the teats (1mk)

14. Where the farmer has limited capital
    Where the land is steep and rugged
    Where the land is small in size
    Where the farmer has limited technical skills.
15. Radding – fitting the rams with breeding chutes with different that help to identify the ram which has mated a particular ewe.
16. Fresh water
17.
    - Broken frames should be repaired or replaced
    - Torn polythene materials should be replaced.
    - Dirty polythene sheets should be cleaned 1 x 3 = 3mks
18. Faults of ignition system
    - Sudden stopping
    - Continous running of the engine 1 x 2 = 2mks

SECTION B

19. (a)N – Shell
    O – Chalaza
    P – yolk 1 x 3= (3mks)
    (b) O – holds the yolk in position (1mk)
    N – Protects the inner contents
    -Allows for gaseous exchange. (1mk)
    (c) eggs for incubation
    - Smooth shell
    - Oval in shape
    - Free from cracks
    - Should be clean
    - Fresh eggs not more than 8 – 10 days
    - Free from abnormalities

(21) (a) Tatooing (1mk)
(b) Tatooing machine (1mk)
(c)
- Branding
- Neck straps and chains
- Ear notching
- Ear Tagging ½ x 2 = 1mk

SECTION C

22. Causal organism
    (a) bacteria (1mk)
    (b)
    - age
    - Stage of lactation
    - Udder attachment
    - Incomplete milking
    - Mechanical injuries
    - Poor sanitation
    - Poor milking technique 1 x 7 = (7mks)

(c) Symptoms

- Milk contains pus, blood
- Udder and teats are swollen
- Death of the affected quarter may result.
- Milky has salty taste
- Water milk with clots 1 x 4 = (4mks)

(d) -Using the right milking technique
-Strict cleanliness and use of disinfectant during milking
- Dry cow therapy.
- Strip cup used to detect mastitis
- Separate udder clothes used
- Remove sharp objects from the grazing field
- Open wounds on teats should be treated immediately.
- The affected quarter of the udder is empties of milking and apply antibiotics\

1 x 8 = 8mks

23. (a) Maintenance of a tractor

- Check water level in the radiator and top up where necessary
- Grease should be applied
- Large sediments from sediment bowl should be removed.
- Engine oil should be checked and added where necessary
- Tyre pressure should be checked every morning.
- The fan belt tension should be checked
- The fuel level should be checked and topped up where necessary
- The brake shaft should be greased
- The level of electrolyte should be checked
- Nuts and bolts should be tightened 1 x10 = (10mks)

(b)

- Direction of the prevailing wind
- Security
- Accessibility
- Type of the soil
- Topography of the area
- Location in reception to other existing structures
- Government policy.
- Social amenities
- Paronomic view
- Farmers taste and preference 2x5 = (10mks)

24. (a) Management of broilers

- Feed on broiler starter mash
- From 4^{th} to 8^{th} well feed on broilers mash
- Provide the bird with coccodiostat together with broilers mash to protect birds from coccodiosis.
- Finisher pellets are given to the birds at the 8^{th} week.
- Provide plenty of clean water
- Vaccinate against new castle at 20 weeks
- Drench the birds against the internal parasites
- Dust the birds with appropriate pesticides to control pests i.e mites.
- Keep litters dry

- Enough floor space should be provided 1x12 = (12mks)

(b) Factors affecting milk composition

- Age of the animal
- Condition of the animal
- Stage of lactation
- Season of the year.
- Type of food eaten by the animal
- Type of breed
- Stage of lactation and pregnancy
- Completeness of milking 1 x 8 = (8mks)

9. Describe the life cycles of liverfloks (Fasciola spp) (10mks)

- Eggs are passed out in faeces by cattle or sheep
- Eggs hatch into miracidium larva under moist condition
- Microcidium larva looks for fresh water snail and bores into it
- Miracidium larva hatchs into different larva farm could sporolyst inside the snail.
- Sporolyst develops into carcaria.
- Radia develops into cercavia
- Cercavia swims out of the snail.
- Cercavia develops into metacercavia (Encycted cercavia)
- Metacercavia is swallowed with the grass by animals
- Once inside the animal, metacercavia migrates to the liver and developes into adult fluke.
- Adult fluke lays eggs in cattle / sheep

19. Well ventilated but free from cold winds (drought)
Provide adequate space for number of animals housed
Allow for proper drainage
Should be leakproof
Should be easy to clean

20. Give six signs to show that a cow is on heat

- Restlessness
- Clear or slimy mucus from the vagina
- Vulva smells and becomes reddish
- A cow mounts on others and when mounted stands still
- Milk yield drops slightly for a lactating cow
- A slight rise in body temperature
- Frequent bellowing or mooing (6x ½ =3mks)

Section B 20mks

21 (a) Identify the above tool
M-wrecking axe (claw axe)
N-Drenching /dosing gun
P-Hand drill
R-prunning shears 4x ½ =2mks
(b) State one main use of each tool
M- splitting timber
Removing nails from the timber
R-Treaming hedges and shrubs 1x ½ mks
(c) Explain one maintenance practice carried out on tool P 1mk

- Cleaning after use to remove dirt
- Greasing/oiling to reduce friction
- Apply oil to prevent rusting

22. (a) Which of the foetus is in correct position of parturition?
F
(b) Name the type of parturition for the foetus F anf G
F-Normal position
G-Breech/malpresentation 2x1=2mks

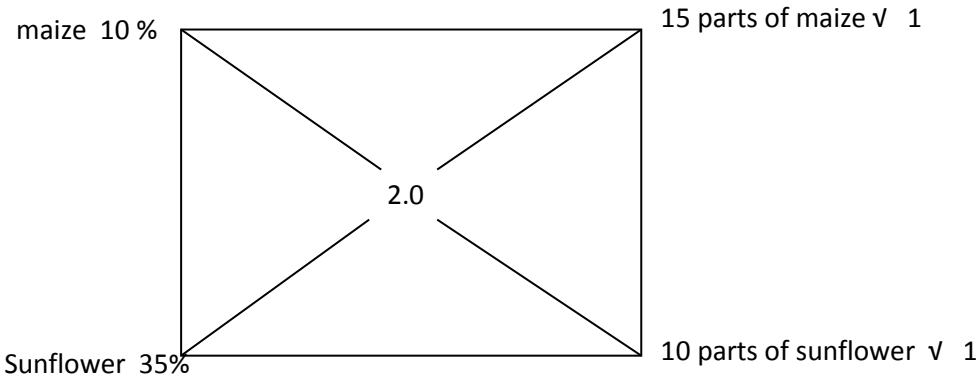
23. (a) Name the parts labeled N,O,A and P
N-Shell
O-Chalazae
P-Yolk (3 X ½ = 1 ½ mks)
(b) Name the type of parturition for the foetus F and G
F- Normal position
G- Breech/malpresentation (2x1=2mks)

23. (a) Name the parts labeled N,O,A and P (1 ½ mks)
N-Shell
O-Chalazae
P-Yolk (3x ½ = 1 ½ mks)
(b) State the functions of the partsO and N 2mks
O-Provides nutrients for the developing embryo/chick
N-It protects the inner content of the egg
It allows for gaseous exchange (1x1=1mks)

© give three qualities of egges used for incubation 1 ½ mks

- Should be fertilized
- Should be of medium size (55-60g)
- Should have smooth shell
- Should be oval in shape
- Should not be cracked
- Should be free from abnormalities
- Should be clean
- Should be fresh i.e collected within 8-10 days/one week 3x ½ = 1 ½ mks)

10. A farmer wanted to prepare a 200kg of chick mash ration containing 20% DCP. Using the pearsons Square method, calculate the amount of maize containing 10% DPC and sunflower containing 35% DCP the far mer would need to prepare the ration (show your working)



Total parts (15 + 10 = 25)√ 1
($^{15}/_{20}$ x 200) parts of Maize √ 1
($^{10}/_{25}$ x 200) parts of sunflower √ 1 (5mks)

25. (a) Name the method of identification shown below
Tatooing
(b) Name the tool used for carrying out the above practice
Tattooing machine 1x1=1mk

© Name two other methods used for identifyimg animals
Branding
Ear tagging
Ear notching
Neck strap/chain (2x ½ =1mk)

Section B

26. (a) Discuss milk fever disease under the following headings
(i) Animals affected
(2mks)
- Cows that have recently calved
- Sows/female pigs that have farrowed recently
- Female goats /does have given birth recently

(ii) Syptoms
- Muscular twitching
- Staggering as the animal moves
- Complete loss of appetite
- Dullness
- The animal lies down and become unconscious
- Body functions such as urination, defacation and milk secretion stops

(5x1=5mks)

(iii) Control measures
- Give intravenous injection of soluble calcium salts
- Give high yielding cows rations containing calcium and phosphorous
- Give vitamin D injection a week before giving birth
- Give feeds rich in minerals starting from the last two months of gestation
- Avoid milking the cow completely during the first week of lactation

(3x1=3mks)

(b)(i) Describe the life cycle of liverfluke (7mks)
- Eggs are passed out in faeces by cattle or sheep
- Eggs hatch into miracidium larva under moist conditions
- Miradium larve hatches into different larval forms called sporocyst inside the snail
- Sporocyst develops into redia
- Redia develops into cercaria
- Cercaria develops into metacercaria (Encysted cercaria)
- Metacercaria is swallowed with the grass by animals
- Once inside the animal. Metacercaria migrates to the liver and develops into adult fluke
- Adult fluke lays eggs in cattle/sheep.

(ii) State three control measures of liverfluke
- Deworming/drenching using appropriate helmintics
- Draining swampy areas/fencing off swampy areas
- Spraying swampy areas with appropriate chemicals e.g copper sulphate solution to kill fresh water snails

27. (a) State the maintenance services carried out in a tractor
- Using a deep stick check the level of oil in the sump and top up if low
- Check the fuel tanl to ensure that there is adequate fuel for the days of work
- Check the level of water in the radiator and top up if necessary
- Check tyre pressure before work and inflate accordingly
- Check the level of electrolyte in the battery and adjust accordingly
- Tighten loose bolts and nuts

- Check the fan belt tension and condition and adjust accordingly
- Check air cleaner to ensure there is no dirt
- Open and remove dirt from the sediment bowl
- Grease moving parts
- Drain the dirty oil completely from the sump and replace with clean oil
- Inspect the gear box oil and refill if the level goes below the recommended level
- Replace the fuel filters
- Grease the linkage and pulley attachment
- Replace worn out tyres

(10x1=10mks)

(b) State and explain five factors considered when siting farm structures (10mks)

Security-certain enterprises should be located where they are secure e.g poultry base, rabit hutchDirection of prevailing wind- livestock houses should be located on the leeward side of movement of materials to and from the farm.

Existing amenities-Farm structures should be located in such a way that it serves the purpose for which it is meant forGovernment policy- Government regulations should be strictly followed in accordance with the laid down regulations .

Location of the structure in relation to the existing structures-supporting structures should be close to one another for ease of management

Availability of space for expansion-enough land should be set aside to allow for future expansion

Type of soil-locate the structures on infertile and firm ground

Direction of the sun—farm structures should be sited in a way that sun rays can reach the structures e.g cal pen.

Farmers taste and preferences-The structures should be located in a place which is pleasing to the farmer

Stating 1mk

Explaining 1mk 2x5=10mks

28. (a) Describe the management of broilers in deep litter system
    - Feed adequate broiler starter mash from 1-4 wks of age
    - Feed adequate follow on mash from 4-8 weeks
    - Feed adequate broiler finisher pellets from 8 weeks of age until slaughtering.
    - Provide adequate feeders and waterers in the house.
    - Vaccinate against Newcastle disease at 3^{rd}-4^{th} wek, Gambaro after 2 weeks, foul typhoid at 7 weeks of age.
    - Isolate and treat sick birds immediately
    - Control external parasites using appropriate pesticides
    - Deworm the chicks
    - Provide coccidiostat in the water to control cocciodiosis
    - Provide dim light to prevent toe pecking.
    - Maintain proper ventilation in the house.
    - Remove the dead chicks and dispose off them properly.
    - Keep the waterers and any other equipment clean.
    - Provide adequate space in the house.
    - Keep the litter dry
    - Keep the litter dry.
    - Keep proper records. (12x2=12mks)

    (b)State and explain eight materials and equipement used during milking
    - Milking pails/bucket-This is for collecting milk during milking.
    - Strip cup- for testing for mastitis
    - Milking stool-used by the milkman to sit on in a comfortable position.

- Warm water- to clean the udder before milking
- It is also stimulates the milk let-down
- Towel- to clean and dry the udder before milking.
- Weighing scale- used to take the weight of milk for record keeping
- Filtering pad-this is used for straining milk to remove dirt and hair
- Milking cans/churns- used to hold milk during storage and transportation.
- Cooking equipment- it is used to cool milk at a temperature of $4^{o}C$ or below to reduce the bacterial multiplication.
- Teat dip-used to disinfect the teat after milking

Stating ½ mk
Explaining ½ mk
} 10x1=10mks