KENYA NATIONAL EXAMINATION COUNCIL
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TOP NATIONAL SCHOOLS

MOI GIRLS NAIROBI
AGRICULTURE
PAPER 2
MARKING SCHEME

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MOI GIRLS NAIROBI KCSE TRIAL AND PRACTICE EXAM 2016

AGRICULTURE

PAPER 2 / 443/2

MARKING SCHEME

1. (a) Notifiable disease is a highly contagious and infectious diseases whose out break must be reported in police / livestock authority. (1 mk)

(b)
- Rinder pest
- Foot and mouth disease
- Necastle
- African swine flu
- Gumboro
- Fowl pox (2x ½ =lmk

2.
- double yolk
- meat spot
- hair cracks
- broken egg shell
- very porous egg shell
- very small size of air space (4x ½ = 2 mks)

3.
- radiator
- water jacket
- water noses
- water pump
- thermostat
- a fanning mechanism (2 x ½ = 1 mk)

4. (a) -Absorb moisture
-keep the floor warm (2 x ½ =1mk)

(b) - To disinfect the feet of the farmer (½ mk)

5.
- possible to implant embryo from a high quality female to less quality female hence improving performance of offsprings.
- Stimulates milk production in female that was not ready to produce
- A highly productive female can be spread over a larger area to benefit many farmers.
- It is easier to transport embryo in test tubes than the whole animal
- Embryo can be stored for long periods awaiting availability of a recipient female. (4x½=2mks)

6. (a) stock and die —used for cutting threads on pipes
Pipe cutter — used for cutting PVC pipes 1 mark

(b) Ball pein hammer — used for riveting and striking the head of cold chisel /straighten bent metal surface.
Claw hammer —used for driving and removing nails from wood /straightens bent nails (1 mk)

7.
- easy to clean /concrete floor and walls/keep clean always

- maintain dryness and warmth / dry litter on the floor
- Adequate space for exercise , feeding and watering
- Proper lighting for synthesis of vitamin D
- Proper drainage to prevent dampness which encourages infection
- Draught free/solid walls to prevent cold wind from entering
- Proper ventilation (fresh air)
- Single housing (4 x ½ =2 mks)

8. (a) starch equivalent the amount of pure starch which has the same energy value as 100 kg of the feed (I mk)

(b) crude fibre- the total amount of fibre content in a feed. it is mainly liquid and cellulose which are not dissolved by weak acids and alkalis . (1 mk)

9. - a crush - ball ring and a lead stick
- with halters - use of lead yoke
- ropes (3x ½ =l ½ mks)

10. - vermin proof
- well ventilated
- waterproof
- easy to clean
- dry/ used above the ground to prevent dampness (4 x ¼ = 2 mks)

11. - Reciprocuting mower
- Rotary mower (Gyro-mower) (2 x ½ =1 mk)

12. (a) — Fresian (¼ mk)

(b) — Jersey (½ mk)

13. - Ages
- stage of caetation period
- udder attachment / loosely/ pendudus
- incomplete milking
- Mechanical injuries
- poor sanitation
- poor milking technique (4 x ½ = 2 mks)

14. - Hormone oxytocin
- adrenalin (2 x ½ = 1mk)

15. - Body size / body weight
- Available feeds stuffs
- Nutrient compositionoffeedstaffs available
- cost of feeds
- ingredients required
- level of production of animals
- Age /stage of growth
- Type of production e.g. broiler (4 x ½ = 2mks)

16.

	Pigs	**Ruminants**
1.	Do not chew cud	chew cud
2.	cannot regurgitate	regurgitate food
3.	cannot digest cellulose	can digest cellulose
4.	enzymatic digestion in the mouth /presence of ptyalin	No ptyalin hence no enzymatic digestion
5.	Most digestion and absorption take Place in small intestine	Most digestion and obsorbtion takes place in the rumen

17. - When flowers are not available / during dry season

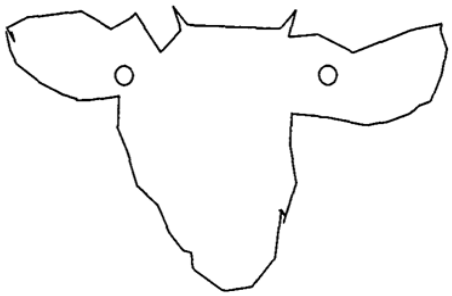
- When a big number beehive is kept (2 x ½ = 1 mk)

18. - High chances of inbreeding/inbreeding not easily controlled
- Possible to transmit breeding diseases e.g. brucellosis
- Possible to transmit breeding parasites e.g.
- Males need extra pasture to eat
- Large males can injure small females
- a lot of semen is wasted
- cumbersome and expensive to transport a bull to not areas to serve cows

(4 x ½ = 2 mks)

SECTION B

19. (i) Ear notching
(ii) 5+3 +2 + 10+10+3 +5+2 = 40
(iii)



20. (a) (i) Head retraction in chicks (½ mk)
(ii) Manganese deficiency (½ mk)
(b) - Sterility in birds / delay in sexual maturity
- Reduces hatchability
- Reduce shell thickness
- Irregular ovulation
(c) - Activates enzymes used in metabolism of carbohydrates, proteins and fats (1mk)

21. (a) A- engine block
B- Air cleaner
C- Sediment bowl
(b) B- removes dust particles from air before it reaches the carburetter
C- removes foreign particles from the fuel (3x ½ =1 ½ mk)
D- collects /traps the solid particles / sediments in the fuel.

22. (a) — Prevent sow from casting feed meant for piglets 1 mark
- prevent sow from lying on the piglets
(b) - dunging (I mk)
- basking

23. (a) (i) Liver fluke (½ mk)
(ii) A- Digestive gland (3 x ½ = 1 ½mks)
B - Muscular pharynx
C- Mouth
(b) —Control fresh water snail through
(i) physically killing them (2 x 1= 2mks)
(ii) use appropriate chemicals e.g. copper sulphate solution
(iii) Draining swampy areas
(iv) Burning pastures

(v) Routine drenching of animals with antihelmintics
(vi) Avoid grazing in marshy areas /waterlogged areas

24. (a) A- prostate gland (3 x ½ = 1 ¼ mks)
B- Sperm duct
D- Epididymis

(b) A- Produces fluid that neutralizes acidic effects of urine in urethra, hence Preventing death of sperms
B- Stores the produced sperms (2 x 1= 2 mks)

SECTION C

25. (a) Foot rot disease

(i) Bacteria (Fusiforms SP) (I mk)

(ii) Predisposing factors (3 x I = 3 mks)

- Dirty and filthy environment / poor hygiene
- Overgrown hooves
- Presence of injurious objects e.g. stones, nails
- Injuries /wounds on hooves

(iii) Symptoms

- Animal limps as it walks
- Foot infected is swollen
- Infected hoof,produce pus
- Foul smell is produced from the infected hooves
- Animal may become lame in severe cases/ inability to walk.
- Infected foot feels hot upon touch
- Lack of appetite
- Animal graze when kneeling in case for legs are infected. (6 xl = 6 mks)

Control

- Treat wounds on hooves using appropriate antibiotics
- Let the animal walk on appropriate foot brown
- Ensure the environment of the animal is not damp and muddy
- Practice hoof trimming regularly
- Administer appropriate antibiotics on infected animals
- Graze animals in areas free from sharp objects (5 xl = 5mks)

(b) **Reasons for feeding cult on colostrums**

- It is highly digestible hence suitable for the undeveloped digestive system of the calf.
- Highly nutritious e.g. contains vitamins for growth
- It has antibiotics
- Has laxative effect /cleans the bower
- It is highly palatable (5 x 1 = 5mks)

26 (a) **Factors that influence out put of draught animals**

- Age —mature animals produce more power output than young ones
- Breed type —indigenous animals are more hardy than exotic
- Training level- Better trained animals have better work output
- Body weight — a draught can pull 10-20 % of its body for 6-8 hours (the bigger the animal, the more the output)
- Harnessing of the animal —well harnessed animal is more effective at work than poorly harnessere one.
- Condition of working equipment on well maintained have higher work out put than poorly maintained ones.

- Environmental /Ambient temperature — cool temperature lead to higher work out put than high temperature.
- Health status — A healthy draught animal has higher work out put than a sick animal. (Any5x 1= 5mks)

(b) **Procedure of harvesting honey in a KTBH**

- Harvest early in the morning or late in the evening
- Approach the hive quietly and blow smoke around the hive and later through the entrance holes using a smoker
- Lower the hive to the ground
- &t the combs from each top bar 3 cm from the surface
- Put the combs in a clean container rubbing off bees using afwig
- Place back the bars
- Do not disturb the brood
- Return the hive to its position (10 mks)

(c)
- Freezing —keeping fish in deep freezers (10 mks)
- Salting —keeping fish in a salt solution /rub granular salt on the fish.
- Sun-drying —fish dried under strong sunlight
- Smoking —expose fish to a temperature 70 °c in a smoking pit /a drum Smokerl smoking house.
- Deep frying fish in deep in looking fat (5 mks)

27. (a) **Parts of a spray case**

(i) sidewalls -. support the piping system
-directs spray work back to the pump through the drainage pipe.

(ii) Spray pipe system — consists of a series of pipes with nozzles which atomises chemicals into spray form.

(iii) Drainage pipe — conducts used chemicals back to the pipe for recycling.
- filters sediments to prevent blockage of the nozzles

(iv) the pump freservour — mixing tank fitted with an agitator pipe and centrifugal pump.

(v) pressure gauge — measure the recommended working pressure of the pump. (7 mks)

(b) **Management of pigs from furrowing to weaning of piglets**

- Remove mucus from nostric
- Cut and disinfect umbilical cord
- Allow piglet suck colostrums
- Provide adequate clean water
- Give creep feeds /pellet
- Teeth chipping
- Give iron injection
- Identification marks
- Deworm /drench
- Dast/ control external parasite appropriately
- Keep in warm house
- Provide balance diet
- castrate male pig. (10mks)

(c)
- birds use less energy in movement resulting in high egg production
- minimal vice behaviours
- eggs are clean as hens do not step on them
- easy to keep accurate egg promotion records for each bird
- easy to handle birds as they are confirmed in layers

- easy to mechanise the system
- Many birds can be kept in a small area.
- birds do not contaminate food and water
- discourages broodiness
- easy to detect and remove lock ones (3 mks)