
KENYA NATIONAL EXAMINATION COUNCIL

KCSE 2007

AGRICULTURE PAPER 2 MARKING SCHEME

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24.14.2 Agriculture Paper 2 (443/2)

1.
 - Gives comfort and warmth to the birds.
 - Helps in drying droppings.
 - Keeps birds busy scratching, thus reducing cannibalism.

(2 x 1/2 = 1 mark)

2.
 - Newcastle.
 - Fowl pox.
 - Fowl typhoid.
 - Gumboro.
 - Marek.

(2 x 1/2 = 1 mark)

3.
 - Poor nutrition.
 - Infertility.
 - Poor timing of service.

(2 x 1/2 = 1 mark)

4.
 - Overfeeding with ordinary milk/ colostrum.
 - Feeding milk at wrong temperatures.
 - Feeding milk in dirty containers/feeding contaminated milk.
 - Feeding young ones at irregular intervals

(2 x 1/2 = 1 mark)

5.
 - Quality of roughages.
 - Availability of the concentrates.
 - Level of production.
 - Economic factors/cost of concentrates.
 - Quality of concentrates.

(3 x 1/2 = 1 1/2 marks)

6.
 - Presence of calf/milkman/milking parlour.
 - Washing/massaging udder.
 - Feeding.
 - Sounds associated with milking.

(3 x 1/2 = 1 1/2 marks)

7.
 - Reduces injury of other animals/handlers.
 - Makes cattle docile/easy to handle.
 - Creates more space for feeding/other animals.

(2 x 1/2 = 1 mark)

8.
 - Halter.
 - Rope.
 - Nose ring and a lead-stick.

(2 x 1/2 = 1 mark)

9.
 - No rigormotise after death.

10.
 - Stomach swells/bloats.
 - Dark red blood oozes out through the natural openings/orifices.
 - Blood does not clot.**(Any 3 x 1/2 = 1 1/2 marks)**
11.
 - Transmit diseases.
 - Cause anaemia.
 - Cause irritation.
 - Cause wounds on the skin that may predispose animals to secondary infection.**(Any 3 x 1/2 = 1 1/2 marks)**
12.
 - Soil type.
 - Topography.
 - Sources of water.
 - Closeness to homestead/accessibility.
 - Closeness to the market centre.
 - Security.**(Any 4 x 1/2 = 2 marks)**
13.
 - Adjust the plough depth.
 - Front furrow depth.
 - Lowering/raising ploughing pitch.
 - Front furrow width.**(Any 3 x 1/2 = 1 1/2 marks)**
14. (a)
 - Saanen.
 - Toggenburg.
 - British Alpine.
 - Anglo-Nubian.
 - Jamnapari.**(Any 4 x 1/2 = 2 marks)**
- (b)
 - Two humps.
 - Hairy body.
 - Absence of trap-nose.**(Any 2 x 1/2 = 1 mark)**
15.
 - Proper sanitation/proper carcass disposal.
 - Regular vaccination.
 - Proper feeding/ nutrition.
 - Imposing quarantine/isolation.
 - Control of internal parasites/ deworming/ drenching.
 - Timely treatment of the sick livestock.
 - Control of vectors/dipping/spraying.
 - Proper housing.
 - Isolation of sick animals.
 - Proper selection and breeding of animals.**(Any 5 x 1/2 = 2 1/2 marks)**
16.
 - Man.
 - Farm animals.
 - Wind.
 - Electricity.
 - Solar energy.
 - Water.**(Any 4 x 1/2 = 2 marks)**
17.
 - Clean regularly.
 - Repaint the base if necessary especially wooden troughs.
 - Repair cracks on concrete / wooden troughs.
 - Replace broken parts.**(Any 3 x 1/2 = 1 1/2 marks)**

- 17.
- Fuel system.
 - Electrical system.
 - Cooling system.
 - Lubrication system.
 - Transmission system.
 - Ignition system.
 - Hydraulic system.
- (Any 4 x 1/2 = 2 marks)*
- 18.
- Raised pens with slatted floor.
 - Permanent calf pens with concrete floors.
 - Moveable calf pens.
 - Temporary calf pens.
- (Any 3 x 1/2 = 1 1/2 marks)*
- 19.
- Presence of broken or soft-shelled eggs.
 - Bright light in the nests allowing birds to see the eggs.
 - Idleness in the poultry house.
 - Inadequate nests forcing some birds to lay eggs in the open.
 - Lack of minerals such as calcium in the diet.
 - Irregular egg collection.
- (Any 4 x 1/2 = 2 marks)*
20. (a)
- **A:** Cross-cut saw.
 - **B:** Rip saw.
- (2 x 1/2 = 1 mark)*
- (b)
- **A:** Cutting across the grain.
 - **B:** Cutting along the grains.
- (2 x 1 = 2 marks)*
- (c)
- Proper storage.
 - Sharpening cutting edge.
 - Oiling to prevent rusting.
 - Repairing/ replacing worn out handles.
 - Setting the teeth.
 - Tightening loose screws.
 - Cleaning blade after use.
- (2 x 1 = 2 marks)*
21. (a)
- (i) Ear notching. *(1 x 1 = 1 mark)*
- (ii) Number 40 (forty). *(1 x 1 = 1 mark)*
- (iii)



(2 x 1 = 2 marks)

- (b) Between 18-1-2007 and 20-1-2007. *(1 x 1 = 1 mark)*
22. (a) Barbed wire strands on droppers. *(1 x 1/2 = 1/2 mark)*
 (b) **C:** Gate post.
D: Stiffener.
E: Dropper. *(3 x 1/2 = 1 1/2 marks)*
 (c) (i) Support the gate post. *(1 mark)*
 (ii)
 - Prevent intruders/wild animals into the farm.
 - Prevent livestock from moving out of the farm.
 - Used as entrance into/exit from the farm. *(2 x 1 = 2 marks)*
23. (a) Ox-drawn mouldboard plough. *(1 x 1 = 1 mark)*
 (b) **G:** Mouldboard.
H: Landside.
J: Share.
K: Land wheel/wheel *(4 x 1/2 = 2 marks)*
- (c)
 - Ploughing.
 - Furrowing.
 - Ridging.
 - Weeding.
 - Harvesting root crops. *(4 x 1/2 = 2 marks)*
24. (a)
 - Easy to keep individual production records.
 - Controls cannibalism and egg eating.
 - No contamination of water and feed.
 - Birds are not exposed to predators, parasites and diseases.
 - Facilitates culling and handling.
 - Easy to collect eggs.
 - Egg losses are reduced.
 - Many birds are kept in a given area/high stocking rate.
 - Eliminates broodiness.
 - Birds still have tender meat at culling due to confinement.
 - Facilitates mechanisation.
 - Keeps eggs clean.
 - Sick birds can be detected easily for isolation.
 - Low labour requirement.
 - Higher egg production due to less energy spent. *(10 x 1 = 10 marks)*
- (b)
 - Body conformation.
 - Fertility/breeding ability.
 - Adaptability of the breed to the area/hardiness.
 - Mothering ability in case of females.
 - Production potential/ yielding capacity.
 - Temperament/behaviour, for example: cannibalism egg eating
 - Deformities/ abnormalities, for example: one eye, lameness.
 - Health.
 - Offspring performance.
 - Age of animal.
 - Growth rate.
 - Lifespan/ reproductive life.

25. (a)
 - Disease resistance *(10 x 1 = 10 marks)*
 - **Induction stroke:** The piston moves down the cylinder causing the inlet valve to open and draw in fresh supply of petrol vapour and air into the cylinder.
 - **Compression stroke:** The inlet valve closes and the piston moves up the cylinder. This compresses the fresh fuel mixture into the combustion chamber.
 - **The power stroke:** Fully compresses the fresh fuel mixture and as a result a spark is produced at the spark plug. This causes the fuel mixture to ignite and expand resulting in pressure that forces the piston down the cylinder.
 - **The exhaust stroke:** The piston moves up the cylinder to eliminate the burnt fuel mixture through an open exhaust valve. *(Total 12 marks)*
- (b)
 - Helps the driver to select any forward or reverse gear.
 - Adjusts speed of the drive from the engine crankshaft to the drive shaft.
 - Helps to alter the speed ratio.
 - Enables the power from the engine to be more easily applied to the work done by the tractor.
 - Enables the driver to stop the tractor movement without stopping the engine or without foot pressing on the clutch all the time. *(4 x 2 = 8 marks)*
26. (a)
 - **Concrete / raised slatted floor:** The pen should always be clean. The pen should be easy to clean.
 - **Dry litter:** Should have dry litter on the floor. The roof should be leak proof.
 - **Adequate space:** The pen should be large enough to allow for exercise/ feeding/ watering.
 - **Proper lighting:** Should have good supply of natural light/ sunlight.
 - **Proper drainage:** Should have good drainage in and around the pen.
 - **Draught free:** The structure should stop strong winds from blowing into the calf pen.
 - **Proper ventilation:** Structure should allow for fresh air circulation.
 - **Security:** Should be strong enough to keep away intruders/ wild animals. *(Any 6 x 1½ = 9 marks)*
- (b) (i)
 - Overcrowding of calves in the pen.
 - Dampness/chilliness in the pen.
 - Poor ventilation.
 - Age/ younger calves are more prone to pneumonia than older calves. *(3 x 1 = 3 marks)*
- (ii)
 - Rough hair coats/ruffled hair.
 - Loss of appetite.
 - Abnormal lung sounds, for example: whizzing.
 - Emaciation.
 - Frequent coughing.
 - Nasal discharge.
 - Fluctuating body temperature.
 - Rapid / laboured breathing.
 - Dull and reluctant to move. *(5 x 1 = 5 marks)*
- (iii)
 - Treating the sick calves with antibiotics.
 - Providing warmth in pens.
 - Maintaining good sanitation in pens.
 - Isolating sick calves to avoid spread of the disease. *(3 x 1 = 3 marks)*