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# 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  $\frac{1}{2}$  = 1½ marks)
11.
  - Transmit diseases.
  - Cause anaemia.
  - Cause irritation.
  - Cause wounds on the skin that may predispose animals to secondary infection. (Any 3 x  $\frac{1}{2}$  = 1½ marks)
12.
  - Soil type.
  - Topography.
  - Sources of water.
  - Closeness to homestead/accessibility.
  - Closeness to the market centre.
  - Security. (Any 4 x  $\frac{1}{2}$  = 2 marks)
13.
  - Adjust the plough depth.
  - Front furrow depth.
  - Lowering/raising ploughing pitch.
  - Front furrow width. (Any 3 x  $\frac{1}{2}$  = 1½ marks)
14. (a)
  - Saanen.
  - Toggenburg.
  - British Alpine.
  - Anglo-Nubian.
  - Jamnapari. (Any 4 x  $\frac{1}{2}$  = 2 marks)
- (b)
  - Two humps.
  - Hairy body.
  - Absence of trap-nose. (Any 2 x  $\frac{1}{2}$  = 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  $\frac{1}{2}$  = 2½ marks)
16.
  - Man.
  - Farm animals.
  - Wind.
  - Electricity.
  - Solar energy.
  - Water. (Any 4 x  $\frac{1}{2}$  = 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  $\frac{1}{2}$  = 1½ marks)

- 17.
- Fuel system.
  - Electrical system.
  - Cooling system.
  - Lubrication system.
  - Transmission system.
  - Ignition system.
  - Hydraulic system.
- (Any 4 x  $\frac{1}{2}$  = 2 marks)
- 18.
- Raised pens with slatted floor.
  - Permanent calf pens with concrete floors.
  - Moveable calf pens.
  - Temporary calf pens.
- (Any 3 x  $\frac{1}{2}$  =  $1\frac{1}{2}$  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  $\frac{1}{2}$  = 2 marks)
20. (a)
- **A:** Cross-cut saw.
  - **B:** Rip saw.
- (2 x  $\frac{1}{2}$  = 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.
  - (ii) Number 40 (forty).
  - (iii)
- (1 x 1 = 1 mark)  
(1 x 1 = 1 mark)



(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)