TERM 2 2025

443/2 – AGRICULTURE MARKING SCHEME PAPER 2

1. **Two notifiable diseases.**
   - Foot and mouth diseases.
   - Anthrax
   - Contagious abortion.
   - Pneumonia
   - Rinderpest. 2 x ½ = 1mk

2. **Four characteristics of a non-layer in poultry.**
   - Has combs and wattles that are dull, dry stirivelled and scaly.
   - Pervic bones cannot allow two fingers to fit between the pelvic bones.
   - The distance between pelvic and kneel cannot allow two fingers to fit between the pelvic bones.
   - The abdomen is contracted, hard and fleshy.
   - The vent is shrunken and dry.
   - The skin is thick and under laid with fat.
   - The eyes are dull.
   - The bird is rarely broody.
   - The beak and shank is yellowish brown.
   - The plumage is shinny and moult. 4 x ½ = 2mks

3. **Differences between an Essex saddle back and Wessex**. (As a whole 1mk)
   - It has black body with shoulders and all four legs.
   - White wile Wessex saddle back has a black body with the shoulders and only the front legs white

4. **Two functions of reticulum.**
   - It sieves and separate fine food from coarse materials.
   - It retains foreign and indigestible materials. 2 x ½ = 1mk

5. **List two predisposing factors of livestock diseases.**
   -Species
   -breed
   -Age
   -sex
   -skin colour

   1mk

6. **Give five reasons for identification of cattle in cattle management.**
   -Makes it easy to select for breeding
   -Facilitates treatment of sick animals
   -Facilitates culling of poor animals
   -Facilitates identification for special feeding.
   -Facilitates individual assessment of animals by record keeping. (5 × ½=2 ½ mks)
   -Makes easy to trace animals if lost or stolen.

7. **Structure that separate honey combs and brood combs.**
   - Queen excluder.

8. **Differentiate between inbreeding and outbreeding.**
   - Inbreeding is mating closely related individuals e.g. sire and daughter while out breeding is mating of un related animals count of the same breed. (Mark as a whole 1mk)

9. **List three signs of furrowing in a sow**
   -Restlessness
   -Enlargement of the vulva
   -Slackening of the muscles on the sides of the tail.
   -Loss of appetite

-Enlargement of the udder and teats
-Collection of beddings at a corner to make a nest. (5 × ½ =2 ½ mks)

3 x $^1/_2$ = 1½mk

10. **Differences between a cross cut and rip saw.**
- Cross cut saw cuts wood across the grain while held at angle 45^0 to the work while rip saw cuts wood along grain while held at angle of 60^0 to the work. 3 x ½ = 1½mks

11. **Reasons why ewes disown lambs.**
- Painful under and teats.
- Case of malnutrition of the ewe.
- If the lamb is weak and unable to keep up with the ewe
- Sick ewe.
- Still birth. 3 x ½ = 1½mks

12. **Four factors considered when selecting goats for breeding.**
- Should have high feed conversion efficiency.
- Be of good size.
- Should be hardy.
- Should have a high growth rate.
- Be resistant to diseases.
- Be heat tolerant.
- Body should conform to the purpose of the breed. 4 x ½ = 2mks

13. **Four condition that make cow withhold milk during milking.**
- Washing the cow in hot water.
- Beating the cow (maltreatment in the process of milking) (Inching pain)
- Change of milkman.
- Unfamiliar noise.
- Absence of food during milking.

14. **Six management practices carried out on fish pond.**
- Feeding.
- Fertilization of the pond / addition of manure.
- Maintaining water level.
- Changing of water.
- Desilting the fish ponds.
- Repair of pond and the fence
- Cropping / selective removal of excess fish.
- Control of predators. 4 x $^1/_2$ = 2mks

15. **Five predisposing factors of mastitis.**
- Dirty and filthy milking sheds that encourages breeding of the bacterial.
- In large and pendulums under hanging below hock / genetic factor.
- Incomplete / partial milking.
- Old age / old animals.
- High yielding cows.
- Stress.
- Injury of udder / teat. 5 x $^1/_2$ = 2½mks

16. **State four reasons for keeping livestock healthy.**
- *Fast growth and maturity is achieved.*
- *A long economic and productive life is achieved.*
- *Maximum production and performance is achieve.*
- *Good quality products are achieved.*
- *Spreaed of diseases is curbed to other animals and human beings*
- *It is economical to keep healthy animals.*

17. **Calculating of dry matter.**

Wt 700 kg
100kg live wt - 2.5 kg DM
700 ?

$$\frac{700 \times 2.5}{100} = 17.5kg$$ 1 x 2 = 2mks

18. **Four factors that influence quality of honey.**
- Presence of impurities.
- Stage of ripening.
- Source of nectar / type of flowers.
- Season of the year the honey is harvested.
- Over smoking during harvesting which give honey bad smell. 4 x ½ = 2mks

SECTION B

19. Identify the type of gate shown (1mk)
Barbet wire gate

(b) C – gate post/King post/strainer
D – Wire loop
E – Dropper.

c) i)State one function of the part labeled F. (1mk)
Support the gate post
To ensure the barbet remains tout.

ii)State two functions of the gate illustrated above. (2mks)

Prevent movement of farm animals outside
Keep away livestock from outside.
Used as entrance into/exit from the farm.

20. (a) **Parts labelled.**
A - Lobe
B - Gland cistern.
C - Teat cistern. 1 x 3 = 3mks

(b) **Pre-requisites of clean milk production.**
- Healthy milking herd - Ensure the lactating cow are healthy and free from mastitis.
- Healthy milkman - The person milking should be free from contagious diseases to avoid contaminating the milk.
- Clean cows - Clean the cows udder / teat with warm water / trim longhair on the flank to avoid contamination of milk.
- Clean milkman - Milk man should wash his hands clean and dry, cut long nails, trim hair, put on a cap to avoid contamination of the milk.
- Clean milking shed - Milking shed should be clean throughout to avoid smells that may taint the milk.
- Clean milking utensils - Utensil should be clean and well disinfected, should be easy to clean and should be free from seams.
- Straining the milk - Use a milk, strainer or a white piece of cloth to remove any solid dirt from the milk.

- Cooling the milk - Milk should be stored under cool temperature below 5° to reduce rate of micro organism multiplication.
- Avoid milk tainting - This occurs as a result of oxidation of milk fats.
Do not use milk utensil with traces of iron / copper / do not feed cow with feedstuff that taint milk before milking. 4 x ½ = 2mks

(c) **Procedure of bull castration using burdizzor.**

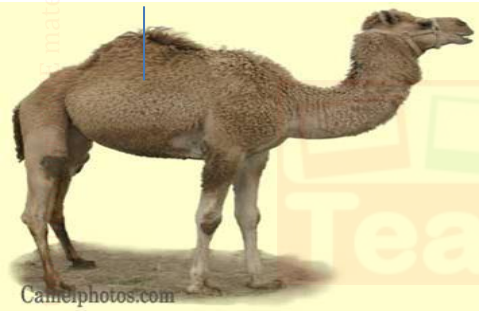
- Restrain the animal.
- With one hand, pull the testicles to let them free from scrotal neck.
- Using the other hand place the cusps of the burdizzor to clasp the scrotal neck.
- With your free hand, locate the spermatic cord of one testis and press handles of the burdizzor till a snap sound is heard.
- Repeat the procedure of cutting the spermatic cord on the testis.
- Finally, release the animal. 6 x ½ = 3mks

21. (a) Milk fever (partioient paresis)
(b) High milk production.
(c) Symptoms of milk fever.

- Muscular twitching causing the animals to temble.
- Straggering as the animal moves.
- Inability to stand thus the animal lies down on the side most of the time.
- Dull eyes and dilated pupils.
- Animal lies on the sternurn with neck twisted on the side (sternal recumbency)
- Breathing becomes slow and weak.
- Temperature falls.
- General paralysis - animals bodily function i.e. urination, defecation and milk secretion stops then death. 1 x 2 = 2mks

22. **The diagram below is an illustration of a camel. Study it and answer the questions that follow**.

L



i. Identify the camel species illustrated above (1mark)

dromendary

ii**. using the letter L indicate on the animal where the load is placed on the camel. (1 mark)**

SECTION C.

23. (a) **Procedure of shearing wool in sheep.**

After proper restraining follow the procedure below in shearing;

- Open up fleece at the base of the neck using a pair of wool shears.
- Then clip all the wool from the neck through the stomach up to the udder or scrotum.
- Turn the animal over and shear the flank from the base of the neck through the left shoulder up to the position where it sit on.
- Likewise turn over the animal and shear the right flank.
- Then roll the sheep over shear the back up to the rump.
- Shear the wool on the head and neck.
- Finally shear the wool on the rump, tail and hind legs.
- Place the fleece on a clear wool table.
- Sort and grade the wool. 1 x 10 = 10mks

(b) **Working of four stroke cycle in petrol engine.**

(i) **Induction stroke**

- Piston moves downwards, creating a partial vacuum on the upper part of the cylinder.
- The partial vacuum causes the inlet valve to open.
- The open inlet valve sucks in fuel and air into the cylinder.
- The exhaust valve remains close.

(ii) **Compression stroke.**
- The inlet and exhaust valves are closed.
- The piston moves up the cylinder.
  The air fuel mixture is compressed in the upper part of the cylinder.

(iii) **Power stroke.**
The piston reaches the upper most portion of the cylinder
At this point the air fuel mixture fully compressed.
- The spark plug produces a spark igniting the fuel air mixture.
- The ignited mixture expands, generating pressure that forces the piston downwards this generating power.
- The inlet and outlet valves remain closed.

(iv) **Exhaust stroke.**
- The exhaust valve opens while the inlet valve remains closed.
- The piston moves up the cylinder and forces out the exhaust gases. 20 x ½ = 10mks

24. **Routine practices and appropriate handling method.**

(i) **Vaccination.**
- Animals should be in a crush to restrict it from running away.
- Young animals should be tied properly in the crush.
- Birds should be held by a helper as the vet. Officer administer the vaccine.

(ii) **Wool shearing.**
- Sheep is made to sit on its rump and then turned as shearing goes on.

(iii) **Ploughing.**
Animal should be properly harnessed by a yoke. The yoke should be made by a soft material to prevent direct injury on livestock.

(iv) **Livestock exhibition.**
Bulls should be paraded by an aid to lead stick and bull rings, cows and heifers held by a halter.

(v) **Transportation.**
- Small animals i.e. rabbit should be transported in cages, mature chicken in coops and chicks in perforated cartons.
- For large animals should be restricted in a vehicle by use of ropes and floor of vehicle spread with saw dust or straw to prevent skidding.

(vi) **Milking**
- Lactating cow should be put in the milk parlour and if necessary tied at the near legs lightly.

(vii) **Castration**.
- Restrain the animals well - use the appropriate tool.

(viii) **Deworming:**
- Correct equipment should be used.
- The drug should be given small amount until the whole dose is given to prevent choking the animal. The restraining should be applied to avoid stressing the animals.

(vix) **Debeaking.**
- Restrain the chicken by tying the legs. Hold the chicken under the armpit and debeak.

(ix) **Ear notching**.
- Identification put the animal in crush. Hold the ear and punch the ear appropriately.

(x) Treatment.

(xi) Dehorning. 10 x 2 = 20mks

25. **a) Outline five benefits of using biogas as a source of power in the farm. (5 marks)**

- • Is a cheap source of energy.
- • Requires low running / maintenance costs.
- • Is versatile / can be put to many sues such as lighting, cooking, electricity generation etc.
- • Does not pollute the environment / environmental friendly.
- • Is a sustainable / renewable source of energy.
- • By products / fermented slurry is used as manure.
- • Income generating / sell to neighbours.
- • Raw materials easily available.

b) life cycle of pork tapeworm (Taenia solium)

- Adult tapeworm releases proglottides.
- Proglottides are passed out with faeces from human beings.
- The segments degenerate and release the eggs.
- Eggs are eaten by grazing pigs, which are the intermediate host.
- The eggs hatch into embryo in the intestines of the host.
- The young worms (embryo) penetrate the intestinal walls into the blood stream.
- The embryos are distributed in the body into the muscles of the animal.
- In the muscles, the embryos become encysted and are then referred to as bladder worms.
- If man eats undercooked infested pork, the cyst wall dissolves and the young worm is set free.
- The worm attaches itself o the walls of intestines of man using hooks and suckers.
- The young worm develops into an adult tapeworm, and lifecycle continues.

1 x 10 = 10mks

c) Describe how three point linkage is used to attach implements to the tractor.

- The three point linkage is used to attach the trailed or mounted on to the tractor.
- The lower links which are not adjustable are hitched to the lower links of the implements while the top one which is adjustable is attached to the top link of the implement.
- The top adjustable link of the tractor is used to lift the implement through the hydraulic power system when in operation or when transporting an implement.
- The two lower not adjustable links are used to hold the implement in place and provide stability.
- Check chains on the lower links are used to prevent the implement from getting into contact with the tractor tyres when the tractor is moving.