443/2
AGRICULTURE
PAPER 2
JULY / AUGUST 2026
MARKING SCHEME

1. Calf , piglet
   Heifer , pullet
   Boat , cock (6 x ½ = 3mks)

2. - Poor housing hygiene
   - Poor feeding
   -Over feeding the calf on milk.
   -Feeding the calves on cold milk.
   - Lack of colostrums.
   -Feeding at irregular intervals. (2 x ½ = 1mk)

3. a – Fresh water snails.
   b – pig , cattle. ($2\times{}^{1}/_{2}$=1 mk)

4. -Help to identify the ewes that have been served.
   -To identify the rams which have served the ewes.
   -To identify the infertily ewes.
   - To identify the most active rams. (1 x 1= 1mk)

5. - The power output depends on the speed of moving water
   - Depends on availability of moving water.
   -Depends on the volume of water.
   -Its not reliable in case of drought.
   -Its expensive to harness.

6. a) Bastard file is used for sharpening tools, smoothening and shaping edges of metals while Rasp file is for smoothening and shaping of wooden structures/surfaces.

   b) Coping saw is used for cutting (curves on thin)wood while hacksaw is used for cutting metals.

7. - Crush
   - Halter
   - Bull ring and lead stick.
   -Ropes.
   -Yoke.
   -Casting

8. a) Saanen
   - Toggenburg

- Anglo – Nubian
- Jamnapari
-Alpine (Kenyan,British,German) (4 x ½ = 2mks)

b) -Two humps
- Smaller than dromedary
- Has more fur than dromedary
- Has shorter legs. (2 x ½ = 1mk)

9) a) – Dullness
- Muscular twitching causing the animal to tremble
- Staggering as the animal moves
-Animal falls down and becomes unconscious.
- The animal lies down on its side and the whole body stiffens.
- Body functions such as urination, defecation and milk secretion stop.
- Sudden death if the animal is not treated immediately.
-Stomach content are thrown into the mouth which later causes lung infection .
- Complete loss of appetite (4 x ½ = 2mks)

b) – Intravenous injection using soluble calcium salt/calcium borogluconate.
- Partial milking within the first 10 days for cows with history of milk fever.
- Give high yielding cows ration containing high calcium and phosphorous.
-Give high doses of vitamin D and parathyroid extractions.
-Keep the animal on a comfortable position i.e on its sternum.
- Mechanical removal of urine. (2 x ½ = 1mk)

10. -Fuel system
- Lubrication system
- Cooling system
- Electrical system (4 x ½ = 2mks)
-Ignition system
-Power transmission.

11. a) – Helps to keep the house warm.
- To absorb moisture from the droppings hence making the house dry.
- Keeps the birds busy by scratching. (2 x ½ = 1mk)

b - Newcastle
- Fowl pox
-Gumboro/infectious basal disease.
-Fowl typhoid.
-Marek's disease. (2 x ½ = 1mk)

12. Raised/ slatted floor pens.

Permanent calf pens with concrete floor
Mobile calf pens (3 x ½ = 1 ½ mks)

13. - Highly nutritious i.e. rich in proteins, vitamins, minerals and fats
- Rich in antibodies which pass immunity from the mother to the calf
- Has laxative effect which clears the first feaces from digestive system.
-Highly digestable.
-Highly palatable. (4 x ½ = 2mks)

14. - Must be fertilized
-Free from internal abnormalities e.g. blood spots.
2-Medium size / 55gm- 60gm.
-Smooth shelled.
-Oval shape
-Free from crack
-Clean
-Fresh i.e not more than 10days old.

15. One bird occupies $0.27M^2$
Area available = 9 x 3M = $27M^2$ $= 1/2$
1 bird = $0.27M^2$
? = $27M^2$ $= 1/2$
$= \frac{27M^2}{0.27M^2 \times 1} = 100$ $= 1/2$
= 100 birds $= 1/2$

SECTION B

16. ***(a). identification of***
A- Lice/louse
B- Flea
C- Liver fluke / fasciola spp.
D- Roundworm / Ascaris spp

(b).Differences
A. -External / Ectoparasites
C- internal parasites / Endoparasites

(c).Effective control method of C
- Eradicate water snail / round snail / lymnac SPP(control intermediate host)
- Deworming / use of Antihelminthetic drugs.
- Burning infested pastures during dry season.
- Avoid grazing in marshy areas.

17. ***(a). Farm implement – ox – plough/***Animal drawn plough
(1/2mrk)

(b). A- Mould board ($2\frac{1}{2}$mrks)

B – Share

C – Main beam

(D) – Land wheel

(E) –Landside rej. slide

(c). Function of . (1mrk)

C – Attachment of all parts.

-Adds weight for deeper ploughing`

E – Stabilizes plough against side thrust by furrow slices (1mrk)

18. ***Stages of four stroke cycle engine***

- G –induction
- H –exhaust
- I –compression
- J –power

(b) Disadvantages of a four stroke engines ***(2mrks)***

- Are expensive to buy.
- Its expensive to maintain
- Their use is limited in areas that are slopy/ rough terrain.
- They require more skilled personell and support services
- It consumes more fuel.

(c) Function of part K

- Produce spark for ignition

19. a) Artificial vagina

b) Provide warm temperatures that stimulate the bull to ejaculate.

c)

- Restrain the teaser cow/cow on heat in a crush.
- When it mounts the cow,direct the penis into the artificial vagina.
- The bull ejaculates in the artificial vagina due to the warm temperature provivided by the warm water.
- Release the cow.

SECTION C

20. (a) Brucellosis Disease.

(i) Cause: - Bacterium / *Brucella abortus.* ***(1x1=1mrk)***

(i.) Symptoms:-

- Spontaneous abortion / premature birth;
- Retained afterbirth after abortion during later stages of pregnancy.
- Cow may become barren;
- Bulls have low libido
- Inflamed testis (Orchitis)

- Yellowish , brown , slimy, odourless discharge from the vulva may occur after abortion. **(1×4= 4 marks)**

(iii) Control:

- Use artificial insemination;
- Kill and properly dispose off the carcus.
- Vaccinate against the disease;
- Attendants should avoid contact with aborted foetus.
- Carry out blood tests for breeding animals in order to detect the infected ones;
- Cleanliness in the animals house must be maintained;

(1x5)=5mrks)

(b) Importance of keeping livestock healthy:

High quality product; fetches high market prices;
Fast growth ; hence reaches market weight early/ensure long productive life;
Economic to keep, saves on expenditure on veterinary services and drugs;
Produce healthy products; hence no risks of transmitting zoonotic diseases;
High yields; hence high returns;
Fetch good market prices ; hence high returns;

(Any 5 correctly explained (2x5) =10mrks)

21. (a) Factors to considered when selecting livestock:

Age:- Young animals should be selected since they have a long productive life.
Level of productive: Select animals with the highest level of production;
Quality of products: Select from those producing high quality produce:
Health:- Select animals that are healthy and disease resistant. Should also be free from physical deformities:
Body conformation: - Select according to their proper body conformation e.g. wedge shape in dairy cattle;
Temperament / Behaviour : - Selected animals should have good temperament and behaviour e.g. docile;
Prolificacy: - Should have history of producing a large litter/twining at a time e.g. in pigs;
Mothering ability:- Should be able to raise their young ones successfully upto weaning;
Fertility: - Should be fertile and able to breed regularly;
Adaptability:- Should be well adptated to the prevailing environment ;
Growth Rate:- Should have a fast growth rate.
True to type -Should conform to breed characteristics;

(Any 10 correctly explained – (1x10=10mrks)

(b) Management during parturition in cattle:

- Watch for signs of parturition;
- Separate the animals and put it in a parturition pen;
- Watch for breech presentation, and seek the assistance of a veterinarian;
- Remove mucus around the muzzle of young one to allow for efficient breathing;
- Administer artificial respiration to the young one if breathing is delayed;
- Allow the young one to suck colostrum.
- Allow the mother to lick the young one/ wipe the calf using a clean piece of cloth if the mother does not lick it;

- Tie and cut the navel cord;
- Disinfect the navel cord wound using iodine;
- Check and ensure the placenta comes out, if not after 48hrs consult a veterinarian;
- Weigh and record the weight of the calf; to help monitor growth;
- Separate the calf from the dam after it has been licked and take it to a warm calf pen;

Any 10 pts=(1x10) =10mrks)

22.(a) -Locate the area to be fenced off.
-Clear the fence line.
-Measure the area/length and determine the amount of material needed.
-Mark out the fencing holes and locate the gates and passes.
-Dig the holes to a depth of 0.6m/0.9m deep or appropriate depth using appropriate tool.
-Put the treated poles / posts in the holes in an upright position. -
-Reinforce the poles / post with concrete or affirm the soil all around them till they are firm.
-Lay out the barbed wire leaving a space of 24-36cm between each wire line although this can vary.
-Brace the corner and gate posts securely to ensure proper wire tension

-Drive in the staples or fencing nails.Use wire strainer to tighten the wire.
-Fix the lower strand of wire first and use it as a guide to fix up to the required number.
-Install the gates

(10x1=10mks)

(b) -Higher egg production due to less energy wastage.
-Easy to keep individual production records.
-Control cannibalism and egg eating.
-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 small area/high stocking rate.
-Eliminate broodiness.
-Birds have tender meat at culling due to confinement.
-Facilitates mechanization.
-Keeps eggs clean. (10x1=10mks)