

MOMALICHE

443/2 AGRICULTURE

MARKING SCHEME

1. Large white 1 x ½ = ½ mk

2 Epistasis is a combination of genes which on their own could have been inferior or undesirable
1 x 1 = 1mk

3. four reasons of treating timber before roofing farm buildings 4 x ½ = 2mk

- Prevent attack from insects
- Prevent attack from fungi (rotting)
- Resist weather condition: -extreme temperature
- Resist water penetration
- To harden wood/make it durable and more strong
- To avoid warping

4. four abnormalities of eggs that can be detected during egg candling. 4 x ½ = 2mks

- Absence of yolk.
- Double / triple yolk.
- Air space in wrong position.
- Excessively large air space.
- Cracks on egg shell.
- Blood / meat spots.
- Deformed / broken yolk.

5.

- Tsetse flies
- Ticks 2s x ½ = 1mk

6 Steaming up of ewes to have milk to be suckled

- Use of lambing pens
- Ewes are made to recognize lambs after lambs
Blind folding ewes to activate maternal instinct 4 x ½ = 2mk

- Attend/ treat inflamed udders/ painful

7. Monkey strainer/wire strainer 1 x 1/2 = 1/2 mk

8. - Filthy surroundings e.g. wet and muddy areas cracking of the hooves

- Sharp objects in pastures

- Overgrown hooves/elongated hooves 2 x 1/2 = 1mk

9. - Provide shade to livestock

- Cheap and easy to establish

- Tall varieties act as wind breakers e.g. kai apple

- Have aesthetic value/beauty

- Roots hold soil firmly controlling soil erosion

- Some can be used as livestock feed

4 x 1/2 = 2mks

10. (a) Are diseases that are transmitted from animal to man or from man to animal

1 x 1 = 1mk

(b) Anthrax, Brucellosis, Rabies, Tuberculosis, Rift-valley fever, Trichomoniasis,

Mad cow disease

2 x 1/2 = 1 mk

11 - mass selection

- Progeny testing

- Contemporary comparison

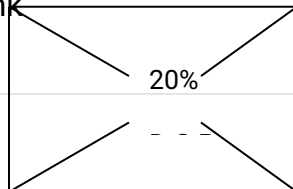
3 x 1/2 = 1 1/2

mk

12. bull – mature male cattle - Bullock -mature castrated male cattle 1 x 1/2 = 1mk

Billy –mature male goat - Nanny –mature female goat 2 x 1/2 = 1mk

13. Wheat (35%) 1/2 mk 10 Parts of wheat 1/2 mk



1/2 mk

Sunflower (10%) 1/2

mk

15 parts of

..

10 x 100 = 40 kg of wheat ½ mk

25

15 x 100 = 60kg of sunflower cake ½ mk

25

14. - Purity – free from wax/wings/smoke/combs
- Colour – brown yellow
- Viscosity – not dilute or too thick
- Smell – right smell not of rotten combs 4 x ½ = 2mks
15. - Spacious 4 x ½ = 2mks
-High above the ground/well drained site
- Well ventilated
- Well lit
-Leak proof roof
-Draught free wall
16. - To prevent moisture from raising up
- To prevent/control termites from ascending
- To prevent coldness from ascending 2 x ½ = 1mk
17. - To aid in grinding grains into paste by thick muscle of the gizzard 1 x 1 =
1mk
18. (i) - Sahiwal
- Red poll

- Simmental
 - Brown Swiss 2 x ½ = 1mk
19. - Injection
- Orally
 - By inhalation
 - Through the cloaca 2x¹/₂ marks

SECTION B

- 20 a) Artificial incubator 1 x 1 = 1mk
- b) A. Thermometer
- B. Water bath/warm water
- C. Damp cloth ½ x 3 = 1 ½ mks
- c) A- To check temperature in the incubator
- B- Distribute the heat from heat source evenly/maintain relative humidity.
- C - Maintain relative humidity ½ x 3 = 1 ½ mks
- d) - Ensure even distribution of warmth for even chick development 1 x 1 =
1mk
- 21 a) D - Rafter
- E - Cross tie
- F - Purlin
- G - Gutter ½ x 4 = mks
- b) To support roofing materials
- to ensure that the roofing materials are firmly held after nailing on to the iron sheets. ½ x 2 = 1mk
- c) G-
- i. To collect water to be stored in water tanks.
- ii. To prevent rain water from splashing directly on to the walls.
- 22 (a) Methane gas 1 x 1 = 1mk

(b) Slurry – it is used for manuring crops on the farm

1 x 1 = 1mk

(c) Animal wastes e.g. cow dung, poultry droppings and pig waste

1x1=1mk

(d) (i) it is used for cooking and heating

(ii) in some countries, biogas is used in internal combustion engines

(iii) used for lighting

(iv) Used to power any household electronic device (any electronic mention by name) **1 x2=2**

23. (a) Identify the above tools

M-wrecking axe (claw axe)

N-Drenching /dosing gun

P-Hand drill

R-prunning shears 4x ½ =2mks

(b) State one main use of each tool

M- splitting timber

Removing nails from the timber

R-Trimming hedges and shrubs 2x ½ mks=1mks

(c) State two maintenance practices carried out on tool P 2mks)

- Cleaning after use to remove dirt
- Greasing/oiling the moving parts to reduce friction
- Apply oil to prevent rusting

SECTION C

24(a)(i) **Newcastle disease.**

- Casual organisms.

- virus.
- (ii) **Signs of attack:**
 - Difficulty in breathing.
 - Beaks remain wide open and necks are strained
 - Dullness,
 - Birds stand with eyes closed all the time.
 - Loss of appetite.
 - Nasal discharge which force the birds to shake their heads to clear it.
 - Birds walk in a staggering motion since the nervous system is affected
 - Often the birds have their heads down.
 - Drooping wings.
 - Birds produce watery greenish diarrhea.
 - Eggs laid have soft shells.
- (iii) **Control Measures:**
 - Vaccination during the first six weeks and then two to three months later.
 - Quarantine.
 - Kill the infected birds and burn them.
 - Obtain stock from reputable source
- (b) - Records are easily kept therefore culling is easy.
- Birds do not become broody.
- More eggs are collected to restricted movement of hens and complete control of egg eating.
- Tender meat is obtained from the culls because the muscles have not been toughened much.
- Handling is easier than in the other systems and individual attention to hens is given.
- Stocking rate is very high.
- Vices are greatly reduced.
- Eggs are clean because hens do not step on them.
- Birds do not contaminate the food and water.
- Sick birds can be detected easily and isolated for treatment.
- Wire floors prevent re-infestation of parasitic worms and coccidiosis.
- No bullying during feeding.
- Low labour requirement.

Any 10 x 1 = 10 marks

- 25 (a) (i) Parasites lower field and quality of livestock production.
- Some are vectors of livestock diseases.
- (ii) Pests reduce pasture and fodder available for livestock – termites destroy

animal structure.

(iii) Pathogens like protozoa, bacteria and viruses cause diseases.

(iv) Predators like lions, jackal, hyena and mongoose predate on livestock in the field and their houses. Birds predate on fish.

(v) Nitrogen fixing bacteria convert nitrogen into nitrates which improve proteins content and hence palatability of forage crops.

(vi) Weeds choke pastures, others lower quality of pasture grasses and livestock products e.g milk

(vii) Denitrifying bacteria converts nitrites to nitrogen which reduces protein content and

palatability of forage crops.

Biotic factor (4 x 1 = 4 mks)

Description (4 x 1 = 4 mks)

- (b) - Makes operations faster.
- Makes work easier and enjoyable.
- Improves efficiency as more work can be done over a short period of

time.

- Economize on the use of labour.
- Increase production by benefiting from economies of scale.

Any 4 x 2 = 8 marks

The point should be explained.

- (c) - Presence of calf.
- Presence of milkman.
- Rattling of milk equipment.
- Site of food / feeding the animal.
- Massaging / washing the udder with warm water.
- Sight of milk parlour.

Any 4 x 1 = 4 marks

26. (a) (i) Oil bath air cleaner A– Check for oil level add more if low.
(ii) Battery – check for electrolyte level, and top up if low.
- Check terminals for tightness and corrosion clean and

tighten if dirty.

(iii) Fuel – check for fuel in tank and fill if low.

(iv) Radiator – Check for water level and top up with clean water if low.

(v) Fan belt – check for fan belt tension and tighten if loose.

(vi) Engine oil – Check oil level using a dip stick and move if level is low.

W (vii) Tyres – check tyre pressure and add more if pressure is low.

(viii) Bolts, nuts and pins – check for tightness and tighten if loose.

- (ix) Grease all moving parts by applying grease at grease nipples.
- (x) Check sediments bowl and drain it if dirty.
- (xi) Check for any visible anomalies and rectify them accordingly.

(10x1) marks

(b) - Posture of the animal appears unusual compared to other animals of the same species.

- Animals appetite is reduced.
- The skin coat would be staring or mated.
- Animal may isolate itself from others.
- It may be producing abnormal sounds, for example coughing or sneezing.
- Its appearance may be dull compared to others.
- Its faecal matter may be watery or very hard.
- It may be producing discharge from external openings, for example eyes

and vulva.

Any 5x2 = 10 marks