

MWAKICAN JOINT EXAMINATION TEAM
AGRICULTURE FORM 4 PAPER 2
MARKING SCHEME

1. - Rotational grazing
- Hand picking / deticking and killing
- Hand dressing
- Burning pastures / paddocks
- Double perimeter fencing (1x4) 4mks
2. - Hormones e.g. stilbestrol
- Antibiotics e.g. tetranynne

Reg collidiostat medicants 2 x ½ = 1mk
3. (a) Grass tetany – Lack of magnesium ions (mg^{2+})
Milk fever - Lack of calcium ions (Ca^{2+})

(1/2 mk)
4. - Oxytocin
- Adrenaline (2 x 1/2 = 1mk)
5. (a) - A disease that is highly contagious and infectious and needs notification of the relevant authorities to impose quarantine for its control. (1mk)
- (b) - Rinderpest (cattle plague)
- Anthrax
- New castle
- Foot and mouth disease
- Rift valley fever (4 x ½ = 2mks)
- (c) - Filthy surroundings e.g. wet and muddy areas
- Sharp objects
- Overgrown hooves (3 x ½) = 1 ½ mks)
- 6 - Soldering gun
- Tins ship
- Centre punch
- Hacksaw (4 x ½) = 2mks
7. - Smooth shell
- Medium size
- Clean
- Free from abdonalities e.g. blood spot, meat spot, double yolk
- Free from crack
- Fertile egg (4 x ½ = 2mks)
8. - Vector control
- Isolating sick animals
- Vaccination
- Use of prophylactic drugs (4 x ½ = 2mks)

9. - Natural rearing
 - Foster rearing
 - Artificial rearing / bucket feeding (3 x ½ = 1 ½ mks)
- 10(a) - Are those that are transmitted from animal to a man or from man to animal. (1mk)
- (b) - Anthrax, Brucellosis, Rabies, Tuberculosis, Rift valley fever, Trichomoniasis, mud cow disease (2 x ½ = 1mk)
11. - 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
 - Can be used as a livestock feed. (3 x ½ = 1 ½ mks)
12. - To aid in grinding grains into paste by thick muscle of the gizzard. (1mk)
13. - 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 mks) = 2mks
14. - Lack of calcium
 - Effects of some diseases e.g. New castle
15. - Mass selection
 - Progeny testing
 - Contemporary comparison (3 x ½ = 1 ½ mks)
16. - Monkey strainer / wire strainer (1x1 = 1mk)
- 17(i) N - Yolk
 Q - Shell membrane
 P - Egg shell (3 x ½ = 2mks)
- (ii) M - Holds the yolk in position (central position)
 L - Air space (supplies air to the developing chick) (2 x 1 = 2mks)
- (iii) - Prevent germinal disc from sticking on the side
 - Ensure enough ventilation to all parts. (1 x 1 = 1mk)
18. - To prevent warping / bending or twisting
 - To prevent rotting / damage by fungi
 - To protect it from pest attack
 - To make timber achieve its maximum strength (4 x 1 = 4mks)
- 19.(i) - H - Adjustable spanner
 J - Ring spanner
 Q - Watering can (3 x ½ = 1 ½ mks)
- (ii) - Adjustable spanner can be used for tightening / loosening different sizes of nuts while ring spanner can be used to tighten or loosen at least two different sizes of nuts. (1 x 1 = 1mk)

(iii) Causes water to come out in spreading manner hence reducing its impact on seedlings while at the same time avoiding soil erosion. (1 x 1 = 1mk).

20.(a) (i) Entrance / yard
(ii) Foot bath
(iii) Dip tank
(iv) Drainage race (4 x ½ = 2mks)

(b) Exist steps / stairs / lead out stairs. 1 x ½ = ½ mk

(c) part A allows animals to come out of the dip wash / dip tank (1 x ½ = ½ mk)

(d) Cleaning / removing mud or dung
Changing water when dirty
Adding more disinfectant (2 x 1 = 2mks)

21(a) Artificial incubator (1mk)

(b) - Provide fertilized eggs with suitable conditions for embryonic development (1mk)

(c) (i) Water - Gives required relative humidity (1/2 mk)

(ii) Thermometer - Determines actual temperature in the incubator (1/2 mk)

SECTION C

22(a) - Keep off animals / domestic animals
- Add aesthetic value
- Add value to the farm
- May provide livestock feeds, fuel and human food
- Help control pests and diseases
- Some act as wind breaks
- Control breeding
- Control grazing by use of paddocks
- Marking boundaries
- Keep off intruders / thieves (1x10 = 10mks)

(b) (i) - Disconnects engine from rest of power transmission system.
- Interrupts power flow engine, allowing selection of one gear to another.

(ii) - Alters relation between engine speed and wheel speed.

(iii) - Allows one wheel to move faster than the other e.g. corner negotiation, speed reduction mechanism.

(iv) - Rotates wheels and transmits power from differential to final drive.

(v) - Reduces speed of revolutions for low speed to reach the wheel.

(vi) - Wheel rotates allowing tractor movement, order should be maintained (5x2 = 10mks)
(Award explanation if identity / structure is correct.

- 23(a)(i) - Cattle, sheep, goats, pigs (2 x 1 = 2mks)
- (ii) - Ingestion of contaminated water / feed with saliva blood.
- Machinery and animals / human from one form to another. (2 x 1 = 2mks)
- (iii)- Rapid rise in temperature
- Painful blisters in muzzle, udder and mouth
- Lack of appetite – difficult eating
- Excessive salivation
- Lameness and peeling hooves
- Grinding teeth
- Dullness and shivering 4 x 1 = 4mks
- (iv)- Quarantine
- Report to government authorities
- Compulsory vaccination
- Treat the wounds (2 x 1 = 2mks)
- (b) - Rotational grazing / paddocking
- Regular deworming
- Spraying / dipping in acaricide
- Maintaining hygiene / proper sanitation
- Double fencing
- Proper meat inspection
- Proper cooking of meat
- Proper disposal of human waste / proper use of latrines.
- Draining of marshy areas / fencing off marshy areas
- Burning infested pastures during dry season
- Ploughing infested pastures
- Hand picking / physical killing
- Biological control / sterilizing male tsetseflies
- Applying chemicals to kill parasites and intermediate hosts e.g. copper sulphate to kill water snails in marshy areas. 10 x 1 = 10mks
- 24(a) - Use the right tools for the right work
- Handle tools and equipment properly
- Clean tools after use
- Store tools at the right places
- Replace and repair worn out parts of the tools
- Grease moving parts and bearings
- Sharpen cutting edges / digging edges of the tools
- Oil exposed parts to prevent rusting
- Straighten bent blades
- Tighten loose nuts and bolts (8 x 1 = 8mks)
- (b) - Ensure brooder corners are rounded.
- Provide enough brooding space
- Clean and disinfect brooder and equipment
- Provide proper guard around heat source
- Provide proper litter on floor / wood shavings
- Maintain appropriate temperature according to age of the chick
- Temperature during first week 32 – 35⁰C, then reduce accordingly.
- Maintain proper ventilation by adjusting openings.
- Provide adequate fresh quality feeds / chick mash
- Provide dim light in the brooder

- Remove dead chicks
- Provide adequate and appropriate waterers
- Control parasites by applying appropriate pesticides
- Control diseases using appropriate method e.g. vaccination.
- Treat sick chicks
- Provide adequate water
- Keep proper records
- Debeak 8 – 10 days towards end of brooding
- Gradual change of chick mash to growers mash during last one week
- Spread newspapers on top of litter for the first few days and scatter feed on them
- Isolate the sick chicks (12x 1 = 12mks)

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