

FORM 3 AGRIC

END TERM 2

PAPER 2

MS

1. Methods of selection

- Mass selection.*
- Progeny testing.*
- Contemporary comparison*

3 x ½ = 1 ½ Mks

2. Signs of heat in pigs

- Restlessness.*
- Frequent urination.*
- Swelling and reddening of vulva.*
- *Clear slimy mucous from vulva*
- Mounting on others and accepting to be mounted*

3 Work of queen bee

- *Lay fertile eggs.*
- Production of pheromone/queen substance*

4. Dual purpose breed.

- *Downey marsh*
- *Hampshire down*
- *Corriedale*

(2 x 1 = 2

mks)

5. Advantages of AI

- *Easy to control inbreeding*
- *Controls breeding diseases.*
- *Semen from one superior bull can be used to serve many cows.*

- Semen can be stored for long. (4 x ½ = 2 mks)

6. **Identification methods**

- Branding

- Ear tagging

- Tattooing

- Ear notching

- Straps and chains

mks)

(4 x ½ = 2

7. **Importance of roughages**

- Facilitate digestion

- Adds bulk to food.

(2 x 1 = 2 mks)

8. **Notifiable disease** - a disease that once noticed prompts an urgent need for informing the relevant Authority (1/2mk)

9. **Qualities of livestock ration.**

- Balanced in terms of nutrients.

- Highly digestive.

- Highly palatable.

- Free from contaminants

(4 x ½ = 2

mks)

10. (i) **Flushing** – extra feeding of female livestock with high quality feeds done before and after mating to increase chances of conception (1 x 1 = 1mk)

(ii) **Crutching** - Clipping of wool around the female (ewe) vulva to facilitate mating. (1 x 1 = 1mk)

(iii) **Ringling** - Trimming/clipping of wool around the penis sheath of the rams to facilitate mating and reduces infections. (1 x 1 = 1 Mk)

(iv) **Raddling** - Application of colored paste or breeding chute on the underside of a ram; helps to detect ewes that have been served.

11. Three harmful effects of ticks.
Mk)

(1/2x 3=1 1/2

- Suck blood from host animal leading to anaemia.
- Cause wounds through bites which acts as routes for secondary infection.
- Cause irritation through their bites.
- Their bites lower value of hides and skin.
- Some ticks produce toxins that may cause adverse effects.

12. factors when siting farm structures.
Mk)

(4x1/2=2

- Location of the homestead.
- Accessibility
- Security
- Direction of the prevailing wind
- Relationship between structures.
- Farmer's taste and preference.
- Proximity to amenities.
- Topography of an area/Drainage.

13. Categories of farm tools.

(4x1/2=2mk)

- Garden tools and equipment.
- Workshop tools and equipment.
- Livestock production tools and equipment.
- Masonry tools and equipment.
- Plumbing tools and equipment.

14. Reasons for proper care of tools and equipment.
(4x1/2=2mk)

- To increase durability.
- To increase efficiency.
- To avoid damage to the tool.
- To reduce replacement cost.
- To avoid injury to the user.

15. Difference between rip and cross cut saw. (1 Mk)

Rip saw is used for cutting along the grains of wood while cross cut saw is used to cut along the grains

16 Broiler and capon.

Broiler is a bird kept for meat production while capon is a castrated male bird. (1/2x2=1mk)

17. Advantages of embryo transplant.

- A highly productive female animal can be spread over a wide area.
 - It's easier to transport embryos in test-tubes than a whole animal.
 - Embryos can be stored for long periods before transplant.
 - It stimulates milk production in a female not ready to produce. /Stimulate milk production in an infertile high yielding female
 - It's possible to implant embryos from high quality female to less valuable one
- (2x1/2=1mk)

18. Reason for seasoning

-To prevent warping

- prevent rotting

- prevent fungal attack

-prevent insect damage

(4x1/2=2mk)

19. Reason for castrating a goat

- To control breeding diseases which are transmitted through natural mating.

-To control breeding.

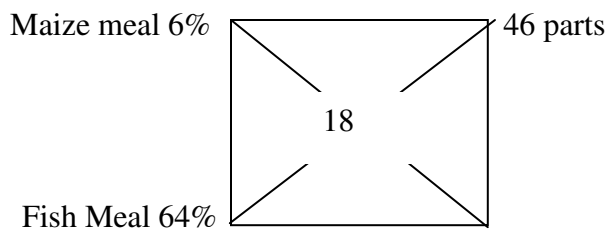
-For faster growth rates.

-Increase quality of the meat by removing unpleasant smell especially in sheep.

-To make the animal docile. (4x 1/2=2mk)

SECTION B (40 MKS)

20. a)



Maize Meal $\frac{46}{58} \times 200 \checkmark = 158.6\text{kgs} \checkmark$

Fish meal $\frac{12}{58} \times 200 \checkmark = 41.4\text{kgs} \checkmark$ (8 x 1/2 = 4mks)

21. a)

S-wood chisel

(2 x 1=2 mks)

P-Bolster/black smiths chisel

Q-Hand brace/breast brace

R-Brace but/Drill bit/bit

4x1/2=2mk)

(b) Uses of S and P

S-Making holes on piece of wood

P-for dressing building stones

(1/2x2=1mk)

(c) Safety precaution

-Ensure that the shank of the bit fits firmly into the jaws of the brace

-Ensure the piece of work is held firmly during the activity

. (1/2x2=1mk)

(d) Maintenance practices of tool Q

Greasing the rotating parts

Replace the worn out parts

(2 × 1=2 mks)

22.(i)

A – foot bath

B – Dip tank/plunge tank

C – Drainage race

D – Dispersal yard/drying yard

(4x ½ = 2mks)

ii)

– *Minimize wastage of acaricides.*

– *Minimize pasture contamination.*

(2x1=2mks)

iii)

– *Repair cracked walls and floors.*

– *Replace expired dip wash*

– *Maintain level of dip wash*

– *Maintain the concentration of dip wash*

– *Clean dipping tank regularly.*

(2x1=2mks)

23. (a) species of the camel

Dromedary

(b)The environmental condition for survival of the camel

- *Dry arid/desert environment* (1 x 1 = 1 Mk)

(c) Reasons for survival in such environment

- *Can stay for long without food and water because of accumulated fat on hump-oxidized*
- *Can resist /withstand high temperature*
- *Can survive on poor pasture*
- *Can walk long distances in search of food and water*
- *Has long eye lashes, preventing sand from entering the eyes*
- *Has nose flaps that prevent dust from entering nostrils*
- *Has paddy hooves that prevent it from sinking in sand* (2x1=2mks)

(d)Another camel species

Bactrian (1 x 1 = 1 Mk)

SECTION C

24 (a) Selection of a breeding stock

- *Age – select young animals that have a long productive life.*
- *Level of performance – select only high yielding animals.*
- *Quality products – select from those that give high quality produce.*
- *Health status – Animals that are healthy and disease resistant are economical to keep.*
- *Body conformation – Should be selected according to the proper body conformation.*
- *Temperature or behavior – Select only docile animals for easy handling.*
- *Mothering ability – Should be able to rear their young one up to weaning.*
- *Growth rate – Should have a fast growing rate and be early maturing.*
- *Adaptability to the environment*
- *Fertility – Fertile and able to breed regularly.*
- *Prolificacy – Should be able to produce a large litter at a time. (10 x 1 = 10 mks)*

(b) Reasons for a healthy stock on the farm

- *Animal grows faster and reach maturity easily.*
- *Enable them to give high quality products.*
- *Helps keep the cost of production low.*
- *Enable animal give high products (quality).*
- *Control spread of diseases.*
- *Increases the life span of the animal/productive life.*
- *Helps animals breed more and regularly.*
- *Enable animals being used for labor to do more work.*
- *Health animals don't spread diseases to either animals or human beings.*
- *Easy to manage- healthy animals require less time as compared to sick animals that require time to monitor/nurse them. (10 x 1 = 10 mks)*

25 (a) Effects of strong wind

- *Agent of weathering*
- *Increasing the rate of evaporation of moisture from the soil.*
- *Blowing away and bring rain bearing clouds*

- *Acting as agent of seed dispersal*
- *Increasing the spread of pests and diseases*
- *Destruction of farm structures*
- *Acting as agent of soil erosion*
- *Areas with high humidity tend to be hotter but when wind takes away atmospheric water, a cooling effect occurs*
- *Increases rate of evapotranspiration*

b) Cultural /biological methods of controlling soil erosion

i) *Grass strips /filter strips*

- *Grass strips are left between cultivated land to reduce speed of water and filter out eroded soil.*

ii) *Cover cropping*

- *Involves establishing a crop that spreads over the soil surface thus protecting soil from the effects of raindrops*

iii) *Contour farming*

- *Cultivation and planting is done across the slope thus helping in holding water infiltration.*

iv) *Mulching*

- *Covers the soil thus reducing splash erosion and speed of run-off*

v) *Intercropping*

- *involves planting together crops that do not cover the soil with those that cover in order to reduce splash erosion and surface run-off.*

vi) *Maximum tillage*

- *Helps to maintain soil structure, leaves a rough seedbed such that soil particles are not easily detached and encourages water infiltration.*

vii) *Afforestation/re-afforestation*

- *Helps to prevent splash erosion by atomizing rain drops and encourages water infiltration; acts as wind breakers.*

viii) *Vegetated water way*

- *Vegetation on water ways slows down run-off and traps eroded soil thus preventing further erosion*

ix) *Strip cropping*

- *Alternating strips of crops that give good soil cover with those that do not. Those that give good soil cover control movement of soil particles thus helping to control soil erosion.*

| | <i>Ruminant</i> | <i>Non-ruminant</i> |
|----|---|--|
| 1. | <i>Polygastric</i> | <i>Monogastric</i> |
| 2. | <i>Chew and regurgitate food</i> | <i>Does not chew and regurgitate food</i> |
| 3. | <i>Digest cellulose in the rumen by micro-organisms</i> | <i>Cellulose digested in the caecum</i> |
| 4. | <i>No ptyalin in saliva</i> | <i>Ptyalin in saliva</i> |
| 5. | <i>Most digestion and absorption takes place in the rumen</i> | <i>Most digestion and absorption takes place in the small intestines</i> |
| 6. | <i>Has alkaline saliva</i> | <i>Has neutral saliva</i> |

Any 5 x 1 = 5mks

(b)

- *Water acts as a solvent for chemical substances*
- *It is a medium of transport in an animal's body*
- *Regulation of body temperature*
- *Maintaining solute/solvent balance in body fluids*
- *Helps in excretion of wastes*
- *Component of body cells*
- *Required in chemical / reactions in animal bodies*
- *Component of body fluids e.g. blood* *5 x 1 = 5 mks*

(c)

- *Handle tools carefully and correctly*
- *Use tools for jobs designed for*
- *Maintain tools in working condition*
- *Learn how to use a tool before using it*
- *Wear protective clothing*
- *Work should be well secured where possible*
- *Store tools in safe place e.g. tool racks*
- *Avoid wearing loose clothes especially when operating tools*
- *Avoid working on dangerous grounds e.g. slippery floor*
- *Ensure there are safety devices e.g. First Aid Kit* *10 x 1 = 10 mks*