

**MARKING SCHEME
AGRICULTURE
FORM 3**

1.a) Give four aspects of rainfall which are important in crop production. (2mks)

- Reliability
- Distribution
- Intensity of rainfall
- Amount of rainfall
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b) Outline the five categories of farm tools and equipment. (2.5mks)

- Garden tools
- Workshop tools
- Livestock production tools
- Masonry and plumbing tools
- Plumbing tools
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c) What is the importance of land preparation. (2mks)

- Removal of weeds
- Breaking the soil into smaller pieces
- Mixing organic matter into soil/ bury crop aeration
- Improve drainage/ water holding capacity
- Destroy pests and disease causing organisms.

d) Give reasons for secondary cultivation? (2mks)

- Removing weeds which have just germinated break soil into small clods
- Make the field level
- Mixing organic matter with soil
- Make land ready for planting.

e) What are the reasons for practising minimum tillage? (2mks)

- Saves time
- Reduces cost of production
- Maintains soil structure/ controls soil erosion
- Maintains soil moisture
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2.a) What are the factors to consider when deciding to irrigate crops? (2mks)

- Type of soil
- Capital availability
- Types of crops to be grown
- Source of water/ water availability/ rainfall pattern

- Size of land to be irrigated
- Profitability of irrigation.

b) Outline the six methods of Land Reclamation.

(3mks)

- Draining swampy land
- Irrigating dry land
- Terracing steep land/ soil erosion
- Afforestation/ reafforestation/ planting trees in wasteland
- Control of tsetseflies
- Deforestation/ bush clearance/ clearing forests.

3. Give six characteristics of dairy cattle.

(3mks)

- Triangular shape -Well attached udder
- Little flesh on the body -Short, well set legs
- Ling, thin neck -Feminine appearance
- Wide spring of ribs -Long, thin tail.

4. What is the importance of crop rotation ?

(2mks)

- Maintains soil fertility/ improves soil structure, aeration, water infiltration, addition of nitrogen by legumes
- Controls pests/ diseases
- Makes maximum use of soil nutrients
- Reduces chance of erosion
- Controls weeds.

5. Give four features a good crop storage structure should have.

(4mks)

- Raised from the ground adequately
- Leak-proof roof/ water proof roof
- Clean or easy to clean
- Vermin proof
- Strong enough to support the produce in store
- Strong enough to keep away thieves
- Well ventilated
- Easy to load/ unload

6 a) What is the importance of keeping livestock healthy?

(2mks)

- To increase quantity of livestock products
- To increase quality of livestock products
- To increase profit level/ reduce cost of production

- To prevent the spread of diseases
- To increase productive life of an animal
- To enable them to breed regularly.

b) Give four categories of diseases.

(2mks)

- Bacterial
- Viral
- Fungal
- Protozoan

c) Give four signs of infestation by external parasites.

(2mks)

- Anaemia
- Irritation/ scratching
- Loss of hair
- Sores/ wounds on skin
- Presence of parasites on animals body

d) Outline six control methods of ticks.

(3mks)

- Use of chemicals/ acaricides
- Ploughing the pastures or crop
- Burning infested pasture
- Hand picking and killing
- Rotational grazing
- Fencing the farm

e) Give six methods of controlling internal parasites of livestock.

(3mks)

- Regular drenching / deworming
- Rotational grazing
- Draining of swampy areas
- Proper sanitation in livestock houses
- Spraying swampy areas with appropriate chemicals
- Burning pastures to kill eggs
- Plough the pastures to bury eggs

7. Define the following terms;

(3mks)

a) Concentrates.

- A feed with high protein and/ or energy content but low in fibre
- Have high available nutrients per unit weight
- Compact in form mashes/ powder, granules, salt and mineral blocks, etc

- Fed in small amounts.

b) Roughage.

- A feed with high fibre contents and / or low energy
- Are bulky, of low digestibility, low in protein, and of plant origin e.g pasture, hay, silage, fodder.

c) Ration.

- Amount of food that will produce essential nutrients to an animal to enable animal meet its nutritional requirements.

d) Production ration.

- Feed given to an animal over and above the maintenance ration to produce a given product
- Used for production of products like milk, meat, also for foetal development, work and growth of young animals.

e) Maintenance ration.

- The portion of a feed required by an animal to continue with the vital body processes

8.a) Give four differences between ruminants and non-ruminants. (2mks)

- Ruminants have four stomach compartments while non-ruminants have only one.
- Ruminants chew cud while non-ruminants do not chew cud
- Absence of ptyalin in ruminant saliva and presence in non-ruminant saliva
- Ruminant digest a lot of cellulose while non-ruminants digest only a little cellulose.

b) Explain the functions of each of the stomach chambers in a ruminant stomach. (4mks)

Rumen:

- First chamber
- Stores and softens food
- Microbial action of food takes place here

Reticulum

- Separates coarse food from fine food particles

Omasum

- Grinds food and reduces water content

Abomasum

- Has enzymes which act on food thus causing food digestion

9.a) Define the term Artificial insemination. (1mk)

- Obtaining semen from males and depositing it in female's reproductive canal by artificial means.

b) Give six advantages of Artificial insemination.

(3mks)

- Cheap / can be afforded by many farmers
- Controls breeding diseases /
- One male can serve many females
- Makes use of good bulls/ quick way of improvement
- Young/ small females not injured
- Used to prevent inbreeding
- Semen can be used in distant places

c) Give four disadvantages of Artificial insemination.

(2mks)

- Can quickly spread undesirable genetic traits
- Requires special equipment and good communication network
- Timing of optimum period is difficult
- Not readily available to small scale farmers.