**TERM ONE 2021**

**FORM THREE AGRICULTURE**

**OPENER EXAM MS**

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

* Reliability
* Distribution
* Intensity of rainfall
* Amount of rainfall

**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

**c)What is theimportance 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

**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 tkill 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 nest 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 places 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.