**FORM 3 AGRICULTURE MARKING SCHEME**

**Term 1 2023**

* Money got from foreign exchange is used to buy farm inputs and machinery not locally produced
* Money earned from foreign exchange is used to pay for expatriate services



* Excessive vegetative growth
* Blossom end rot
* Scorching of the roots
* Increase in incidences of fungal diseases

1. Preference is the act of deciding on how to allocate available scarce resources which can have alternative uses

Choice is the power to use one resource over another among alternative resources

* Requires large tracts of land
* Practised where there is low population
* Low yields observed over a long time

1. These are any practises do to improve land ownerships and use
2. 46 kg of N in 100 kg of urea

120 kg N = 120x 100/46 = 260.869 kg Urea

20 kg P2O5 in 100 kg SSP

60 kg P2O5 = 60 x 100/20 = 300 kg SSP

50kg K2O in 100kg of potassium oxide

80 kg K2O = 80 x 100/50 = 160kg potassium oxide

1. a)

* The nature of the work he is engaging in.
* The condition of the farm in which the tool or equipment will be used
* The financial ability of the farmer.

b) Smoothen circular work in wood

1. a)

* Dairy goat
* Meat goats
* Dual – purpose type of goats.

b)

* Merino
* Cheviot
* Leicester

c)

**Dromedary Bactrian**

Has one hump - has two humps

Larger in size than Bactrian - Smaller in size than Bactrian

Legs longer than those of Bactrian - Legs shorter than those of Bactrian

1. a)

* Tsetse flies
* Lice
* Fleas
* Keds
* Mites

b)

* + Use cattle plunge dipping tank
  + Using a spray race
  + Using hand sprays / cattle spray.
  + Using hand dressing / applying pygrease

1. a) i) Mating of related animals

ii) Mating of unrelated animals

b)

* Injections using hypodermic syringe
* Orally
* Inhalation through nostrils
* Through cloacae.

c)

* Dehorning collodion
* sodium hydroxide paste
* caustic potash stick

d)

* + Crib method
  + Bag method

1. a) Breech presentation

b) j

* Quantity of food already in the digestive system
* Chemical composition of food / ratio of energy to protein
* Form in which the food is fed
* Species of animal.
* Age of animal
* Amount of fibre in food / percentage lignin or cellulose.
* Physiological condition of animal

SECTION B

1. a) D – Hack saw

E – Hand saw/ Rip saw/ Crosscut saw

b) D- Cutting metal rods

E- Cutting Timber

c)

* + - Setting the teeth
    - cleaning after use when dirty
    - sharpen teeth when blunt

1. a) French drains

b)

* Cambered beds
* planting trees such as eucalyptus
* pumping
* open ditches

c) to raise soil temperature

to increase soil volume

to increase microbial activity

1. a) H- Sand

J – Loam

K – Clay

b) H

c) K

1. a) Stir-up pump

b) Apply diluted chemicals to livestock

c) E- Nozzle

F – Lance

G- Trigger

SECTION C

1. a)

* Clean and disinfect the far rowing pen
* Wash / clean and disinfectant the sow.
* Treat the sow against external parasites
* Move the sow to a furrowing pen – 3 days before furrowing
* Provide a creep area.
* Provide clean bedding maternal
* Provide bran for the sow after furrowing.
* Ensure piglets are breathing.
* Ensure piglets suckle colostrum
* Disinfect umbilical cord of piglets.
* Weigh piglets on day one to get birth weight
* Dispose the after – birth
* Dispose off born still piglets on day 1 to attain birth weight.

***Stating ½ mk + Explaining ½ mk = 12mks.***

b)

* Old age
* Health of a boar
* Serious injury of the boar
* When daughters are used as replacement stock / to avoid inbreeding.
* When boar is too fat and lazy.
* Poor performance of offspring
* Lack of libido / infertile boar.
* Bad temperament

***Stating ½ mk +Explaining ½ mk 10mks***

1. a) Biotic factors influencing agriculture

* Pathogens; cause diseases
* Decomposers; breakdown organic matter to humus
* - Pests; damage crop produced reducing their quality and quantity
* Pollinators; transfer pollen from plant to plant to bring about fertilization
* Predators; kill livestock causing loses to farmer
* Nitrogen fixing bacteria; convert nitrogen in the atmosphere to nitrates improving soil fertility
* Parasites; affecting livestock which lowers their value and reduces the quantity and quality of products 6x 1 = 6mks)

b) Aspects of rainfall

- Rainfall amount

- Rainfall distribution

- Rainfall reliability

- Rainfall intensity 4x 1 = 4mks)

1. a) -Factors that determine the number of times secondary cultivation is done

- Type and size of planting material/type of soil

-Cost involved

- Time available

- Skill of the tractor operator

- Topography/slope of land

-Soil moisture content/ Soil type

- Land condition/type of implement used in primary cultivation/amount of

vegetation on the land. ***Stating ½ mk +Explaining ½ mk*** 5x 1 = 5mks)

b) Advantages of minimum tillage

- Control soil erosion

-Reduces cost of cultivation/ save money and time

-Reduces loss of nutrients through oxidation

- Minimizes soil structure disturbance/ maintains soil structure

- Reduces roots disturbance

- Conserves moisture

- Reduces labour requirements. ***Stating ½ mk +Explaining ½ mk*** 5 x 1 = 5mks)

20 a) Importance of water treatment

* To destroy pathogens/ to kill the harmful micro- organisms
* To remove chemical impurities/ soften
* To remove smells/ bad odor
* To remove sediments/ to dissolve impurities. 4x 1 = 4mks)

B) Factors determining the choice of the type of irrigation used.

-Type of soil

-Rate of evaporation

-Quantity of water required and available

- Crop type to be irrigated

- Available capital

- Slope of land. 6x 1 = 6mks)