**AGRICULTURE MARKING SCHEME**

**FORM TWO SCHEME**

**TERM 11 2017**

* Copper
* Iron
* Molybdenum
* Zinc
* Boron 4 X ½ = 2mks
* Fertilizer
* Liming 2 X 1 = 2mks
* Highly soluble in soil water
* Easily leached
* Have short residual effect
* Have scorching / burning effect
* Highly volatile
* Are hygroscopic
* Highly corrosive 4 X ½ = 2mks
* Protein formation
* Forms part of the chlorophyll
* Regulates availability phosphorus and potassium in plants
* Increases the size of grains and there protein content in cereals 2 X ½ = 1mks
* Vegetative materials
* Seeds 2 X 1 = 2mks
* Type of machinery to be used
* Soil fertility
* The size of the plant
* Moisture availability
* Use of the crop
* Pest and disease control
* Growth habit of the crop 4 X ½ = 2mks
* Land is abundant
* Population is sparse
* Number of livestock per unit area is low
* Land is communally owned 4 X ½ = 2mks
* Soil purity
* Germination percentage
* Spacing
* Number of seeds per hole
* The purpose of the crop 4 X ½ = 2mks
* Parent rock material
* Climate
* Topography
* Time
* Biotic factors 4 X ½ = 2mks
* To increase durability
* To reduce replacement cost
* Increase efficiency
* To avoid injury to the user
* Avoid damage to the tool 4 X ½ = 2mks
* Hand digging
* Mechanical cultivation
* Use of an ox-plough 2 X ½ = 1mk

Fertilizer grade indicates a gurantee of minimum content as percentage of N:P2O5:K2O while

Fertilizer ratio is the relative percentage expressed as a ratio of the N:P:K. 2 X 1 = 2mks

* Rainfall
* Temperature
* Wind
* Relative humidity
* Light 4 X ½ = 2mks
* Intensive
* Extensive 2 X ½ = 2mk
* Topography
* Type of crop to be irrigated
* Type of soil
* Capital availability
* Water availability 4 X ½ = 2mks
* Determines the presence or absence of nutrients
* Determine the type and the role of micro0organisms in the soil
* Determine the presence or absence of types of pest in the soil
* Determines the presence or absence of types of diseases in the soil
* Determines the type of crop to grow 4 X ½ = 2mks

Land area

Plant population =

Spacing area

If 1 Hectare = 10000 M2 If 100 CM = 1 M

What about 2 Heactare = 2 X 10000 What about 20 CM = 20 CM X 1 M

100CM

1

= 20000 M2 = 0.2M

What about 10 CM = 20 CM X 1 M

= 0.1M

Plant population = 20000 / 0.2 X 0.1

= 1000000

80% germination percentage thus = 80/100 X 500000

**= 800000 plant population**

Limited supply of available resources for production 1 X 1 = 1mk

* Production
* Inventory
* Field operation records
* Marketing
* Labour 4 X ½ = 2mks

c)

* Help to determine the value of the farm/ determine assets and liabilities.
* Provide history of the farm.
* Assist in planning and budgeting in various fields.
* Helps to detect losses or theft in the farm.
* Assists when sharing losses or profits (dividends)for communal owned farms/ partnership.
* Help to settle disputes in the farm among heirs.
* Help to support insurance claim e.g. against fire and theft.
* Provide labour information like terminal benefits, NSSF due, Sacco dues for all employees.
* Help to compare the performance of different enterprises within a farm or other farms.
* Help in the assessment of income tax to avoid over or under taxation.
* Records, helps to show whether the farm business is making profit or losses. This information
* helps in obtaining credit. 4 X ½ = 2mks
* Soil water
* Soil air
* Soil living organisms
* Soil mineral matter
* Soil organic matter 4 X ½ = 2mks
* Mason’s trowel
* Wood float
* Steel foat
* Spirit level
* Plumb bob
* Mason’s square
* Spade
* Wheelbarrow
* Mason’s hammer 4 X ½ = 2mks
* Ploughing at the same depth
* Using heavy machineries on a wet ground 2 x 1 = 2mks
* Production of one crop
* Large tract of land
* High capital
* High labour
* High yield
* Mechanization 4 X ½ = 2mks
* Surface
* Sub-surface
* Drip / trickle
* Sprinkler / Overhead 4 X ½ = 2mks

A fertile soil is soil with all the nutrients in there right proportions to support plant growth

1 X 1 = 2mks

* Green manure
* Farmyard manure
* Compost manure 2 X ½ = 1 mk

10 – Phophoruspentoxide or P2O5

0 – potassium oxide or K2O 2 X ½ = 1 mk

100 Kg of Ammonium Sulphate = 20 Kg N

What about 450Kg of Ammonium Sulphate = 450 Kg X 20Kg N

100 Kg

= 90 Kg N

Irish potato 1 X 1 = 1mk

X – Eye

Y - Bud 2 X 1 = 2mks

Chitting 1 X 1 = 1mk

* Diffused light
* Partially darkened room 1 X 1 = 1 mk
* Provides raw materials to industries
* Market for agro-based industries 2 X 1 = 2mks
* Causes physical damage to crops.
* Cause rapid spread of diseases/ pests/ weeds.
* Can cause water stress as a result of evaporation.
* Causes stress of crops due to chilling caused cold winds.
* Encourage transpiration hence water and mineral uptake 4 X ½ = 2mks

J – Platy

K – Granular 2 X 1 = 2mks

1. Air space
2. Humus with clay 2 X 1 = 2mks

* Impede drainage
* Impede root penetration 2 X 1 = 2mks
* Brings leached nutrients to the surface
* Breaks hard pans
* Promotes aeration of the soil
* Promotes water infiltration
* Ensures better root penetration 4 X ½ = 2mks
* Press the seeds against the soil moisture
* Controls soil erosion
* Ensure uniform germination
* Controls removal of small seeds by wind
* Breaks large soil cods 4 X ½ = 2mks
* Improves soil aeration
* Raises soil temperature
* Increases activities of micro- organisms
* Increases soil volume
* Prevent accumulation of poisonous substances in the soil 4 X ½ = 2mks

Marcotting 1 X 1 = 1mk

* Remove bark and cambial layer
* Rooting medium applied
* Wrap with a polythene sheet 2 X 1 = 2mks
* Dam
* Weir
* Roof catchment
* Rock catchment
* Retention ditches
* Ponds/ water pans
* Wells
* Micro-catchment 4 X ½ = 2mks
* Well drained place
* Direction of prevailed wind
* Size of the farm
* Accessibility 2 X 1 = 2mks
* Applying basic fertilizer
* Addition of lime 2 X 1 = 2mks

1 – Gutter

2 – Overflow

3 – Drainage pipe 3 X 1 = 3mks

* Free from disease causing organism
* Free from chemical impurities
* Free from smell and bad taste
* Free from sediments 4 X ½ = 2mks
* Used to establish pathogen-free plants
* Used in mass production of propagules
* Is fast and requires less space 2 X 1 = 2 mks

Seedbed is land prepared ready to receive seedling while seedling bed is a special type of nursery bed prepared to raise seedlings received from an overcrowded nursery bed

2 X 1 = 2mks