**FORM ONE,**

**MARKING SCHEME**

**AGRICULTURE**

**SECTION A(30 MARKS)**

1

* To kill the weeds
* Bury crop residues/organic matter into the soil
* Loosen up the soil/facilitate rainfall infiltration/improve aeration/easy penetration of roots.
* Control soil borne pests/diseases by destroying their life cycles.
* Make subsequent operations easier.

2

* Saves time and costs of production.
* Maintains soil structure
* Minimizes soil erosion.
* Less laborious
* Conserves moisture
* Minimizes root damage.

3

* Olericulture is the growing of vegetable while pomology is the growing of fruits.

4

* Temperature/altitude
* Prevailing winds
* Soil types
* Rainfall

5

* Low production
* Uncontrolled mating
* Difficult to control parasites and diseases
* Leads to overgrazing hence soil erosion.

6

* Cause physical damage / breakages to crops (accept any physical damage)
* Causes water stress / increases rate of transpiration in crops.
* Spread crop pests, diseases and weeds.
* Can cause stress to crops due to chilling caused by cold air.
* Cause soil erosion leading to loss of soil fertility.
* Encourage transpiration hence water and mineral uptake.

7. a)

* It is an art and science of crops and livestock production

 b)

* Helps to aerate the soil
* Helps in decomposition of organic matter
* Some strains of bacteria fix nitrogen in the soil
* Some micro-organisms cause diseases in crops
* Some organisms are involved in biological weathering process

c)

* Soil aeration (porosity)
* Drainage
* Permeability
* Capillarity
* Cation exchange capacity

8

* This is a system of farming in which one crop is grown in large scale.

9

* Kills soil organisms.
* Leads to loss of nutrients.
* Destroys soil organic matter.
* Leads to accumulation of some nutrients to toxic levels e.g. potassium.

10

* Use of heavy machinery/implements when soil is wet.
* Continuous shallow cultivation.

11

* Rainfall intensity
* Rainfall reliability
* Rainfall distribution
* Rainfall amount

12

* Control weeds
* Control pests and diseases
* Incorporates organic matter in the soil
* Improves physical condition / form required tilth
* Make appropriate tilth for planting certain crops e.g. ridging, rolling. Leveling

13

* Decompose organic matter.
* Help to aerate the soil
* Atmospheric Nitrogen to nitrates.
* Upon death and decay release plant nutrients.

14 a)

* Physical weathering
* Biological weathering
* Chemical weathering

 b)

* Soil texture is the relative proportion of the different sized particles in the soil;
* Soil structure is the genera appearance of the soil in relation to the arrangement of the individual soil particles.

 c)

* Allows proper infiltration/drainage of water
* Has good aeration.
* It is not easily eroded

15

* Disc harrows
* Spring-tine harrows
* Cultivators
* Rotavators
* Hand hoes

**SECTION B (20 marks)**

16 a)

* S- Wood chisel
* P- Bolster chisel/Mason’s chisel
* Q- Brace
* R- Bit

b).

* S-Making cavities in wood
* P-for dressing building stones
* Q-Used with bit to bore holes in wood
* R-used to bore holes in wood or metals

c)

d)

* Grease revolving parts
* Oil for prolonged storage
* Replace lost bolts and nuts
* Tighten lose nuts

17. a)

* V- Platy
* W- blocky

 b)

* V- Top horizon of forest soil/clayed soils
* W- Clay soils

 c)

* Poor soil aeration
* Poor drainage leading to water logging
* Poor root penetration

18. a)

* 1- top soil
* 2 Sub soil
* 3 Weathered rock
* 4 Parent rock

b)

* B- Prismatic structure
* C- Columnar structure

c) soil erosion/denudation

d)

* Prevents water infiltration
* Prevents aeration
* Lowers root penetration

e)

* Overcultivation
* Burning of land
* Monocropping
* Working soil at wrong moisture content
* Repeated use of heavy machinery

19. a)

* Capillarity

 b)

* K – Loam soil
* L – Clay soil

c)

* L

**SECTION C (40 marks)**

20 a)

* To facilitate subsequent farming operations
* To kill weeds
* To destroy pest and diseases
* To incorporate organic matter in the soil for decomposition
* To improve soil aeration
* To improve improve water infiltration
* To break hard parn
* To losen the soil for easy germination
* To bring inhto the surface leached nutrients

b)

* Disc plough
* Mouldboard plough
* Ox-drawn plough
* Fork jembe

c)

* Topography of the land
* Condition of the land
* Desired depth
* Type of soil
* Scale of operation
* Cost of the implement
* Skill/know-how

21 a)

* Mixed farming
* Nomadic pastoralism
* Shifting cultivation
* Organic farming
* Agrofirestry

b)

* Determines the type of crop to be grown
* Influences the availability of nutrients
* Influences the implement and method used for cultivation
* Influences the amount of moisture held by the soil
* Determines the soil mineral content
* Influences water infiltration

22. a)

* To avoid injury
* Increase durability
* Increase efficiency
* Avoid cost of repair and replacement
* To increase the resale value

 b)

* Wash thoroughly and dry after use
* Replace and repair worn out parts
* Unblock any blocked nozzles
* Tighten any losen nuts
* Grease movable parts
* Sieve water to avoid dirt blocking nozzles

c)

* Garden tools and equipments
* Workshorp tools and equipments
* Livestock production tools and equipments
* Crop production tools and equipments
* Masonry tools and equipments

d) \

* Handle tools carefully and correctly
* Use the tool for the job designed for
* Maintain the tool in good working condition
* Store farm tools in a safe places
* Learn how to use the tool before using it
* Dress appropriate when using farm tools
* Avoid working in dangerous conditions eg. Slippery floor