**FROM 3 END TERM 2 AGRIC PAPER 1 M/SCHEME**

**Section A. (30mks)**

1. **Diseases that attack cabbages. (1.5 mks)**
2. Damping off
3. Black rot
4. Downing mildew
5. **List four factors that causes loss in soil fertility. (2mks)**
6. Over cultivation
7. Overgrazing
8. Continuous use of agricultural chemicals
9. Through soil erosion
10. Burning of vegetation cover to clear the land
11. Monocroping for a long period of time; over the years.
12. **Reasons for seed selection in crop production. (2mks)**
13. To obtain seed suitable to ecological conditions
14. To obtain pure planting material
15. To increase germination percentage
16. To remove pests and diseases infected planting material.
17. **Reasons why a well drained soil is suitable for tomato production .(2mks)**
18. Has improved soil structure
19. Has reduced leading
20. Has improved water holding capacity
21. Has increased caution exchange capacity
22. Has high micro organisms
23. **Conditions that would necessitate irrigation. (1.5 mks)**
24. Inadequate rainfall
25. In reclaiming and semi arid land
26. In paddy rice
27. In green house
28. **Four harmful effects of crop pest (2mks)**
29. Spread diseases to crops, since some are host to disease causing organisms
30. Some feed on leaves therefore reducing the production capacity of the crop
31. Some feed on the fruits therefore lowering it quality
32. Those that feed on grain reduces the production levels

1. **Method of breaking seed dormancy in (1mks)**
2. Calliandar
3. Heat treatment/light burning
4. Rice. (1mks)
5. Soaking in cold water
6. **Benefits of processing certificate of land ownership (title deed). (2mks)**
7. Can be used to secure credit/loan
8. Gives security of tenure
9. Encourages long term investment
10. Enables leasing of part or whole land.
11. **State four advantages of communal land tenure system? (2mks)**
12. There is no land conflict since land belongs to everyone
13. No problem of landlessness
14. There is no land fragmentation
15. It allows free movement of livestock
16. Land is sometimes left fallow to allow pasture to regenerate and regain etility.
17. **Activities that a farmer should carry out on a storage facility before storing farm produce.** (2mks)
18. Clean
19. Check for any damage e.g. leaking root and repairs
20. Clear the surrounding
21. Check the storage capacity
22. Treat the store with appropriate pesticides/dusting
23. Check the security of the store and fire safety
24. **Meaning of terms as used in fertilizer chemistry. (2mks)**
25. Fertilizer grade

Amount of each nutrients in a fertilizer bag of a given heights.

1. Fertilizer

The relative proportion of nutrients in relation to one another

1. **Climatic factors that influence crop production and distribution. (2mks)**
2. Temperature
3. Wind
4. Light
5. Rainfall
6. Relative humidity
7. **Ways in which land consolidation helps to improve farm management. (2mks)**
8. Saves time and money
9. Makes it easy to have a sound farm plan
10. Eases soil conservation
11. Ease supervision of farm
12. Facilitates mechanization
13. **Uses of organic manure in crop production (2mks)**
14. Conserves water
15. Reduces soil erosion
16. Suppress weeds
17. Improve soil structure upon decomposition
18. Add fertility to soil after decomposition.
19. **Definition of terms as used in crop production. (3mks)**
20. Weak fall plants in tomatoes – practice of supporting
21. Hardening off – practice of training seedlings to adapt the ecological conditions prevailing in the main seedbed
22. Organic farming – growing of crops and rearing of animals without using agrochemicals

**SECTION B 20 MKS**

1. **Naming the field practice.**
2. Trellising
3. Passionfruits
4. **Two reasons for carrying out the practice. (2mks)**
5. To obtain clean fruits
6. Easy harvesting, weeding
7. Easy penetration of light
8. Control soil borne tests and diseases
9. Easy penetration of spray

17a) The illustration below shows a cropping programme.



1. Identify the cropping programme (1mark)

**Crop rotation**

1. Giving a reason identify one mistake the farmer made when designing the above programme (1mark)

 **Plating kales after cabbage**

1. State two ways the above programme help in control of weeds (2marks)

**-Parasitic weeds specific to certain crops are specific to certain crops of different**

 **families.**

 **- Providing soil cover to smoother weeds.**

1. Avantages of this programme

**– Maximise utilization of nutrients in soil.**

 **- Control soil borne pest and diseases.**

 **- Control weeds.**

 **- Improves soil fertility – Control soil erosion .**

 **- Improve soil structure.**

18. a**)** Identify the method above

**Individual hooked pegs.**

**(1x 1mk = 1mk)**

 b) Describe the procedure followed in (a) above

**-Tea is planted and hollowed to grow for one year to reach a height of 25-30 cm and**

**then cut back to 15cm above the ground level.**

**-This encourages development of more branches which are left to grow to an angle of 300**

**450 by use of pegs and tips are nipped off .**

**-This stimulates dormant buds to grow into shoots.**

  **(1mk for each correct step , 4 steps x 1mk each = 4mks**

 **Note: procedural marking.)**

19. (b). What does the figures 20 and 10 in the fertilizer stand for? 1mark

* **Ratio of phosphorus pentoxide**
* **Ratio of potassium oxide**

(c). Give two methods can be used to determine soil pH. 1mark

* **use of litmus paper**
* **use of of pH meter**
* **use of universal indicator with and printed colour charts**
* **use of BDH universal soil indicator with printed standard colour charts**

**SECTION C (40 MARKS)**

**20.(a).Process of transplanting a cabbage seedling. (5mks)**

1. Water nursery thoroughly before transplanting
2. Dig the planting holes at the appropriate depth
3. Only health and vigorously growing seedling are selected.
4. Lift the seedlings with a ball/lump of soil attached to the roots using a garden trowel or with the help of stick uproot the seedlings
5. Transport the seedlings carefully to the field using appropriate means i.e. a wheelbarrow
6. Place insecticide in the hole to control soil borne pests such as nematodes
7. Add/tea spoonful of phosphate fertilizers to the planting hole, mix the fertilizers with the soil.
8. Add one handful of humus and also mix thoroughly with the soil
9. Transplant and place the seedling in the planting hole at the same depth they were in the nursery.
10. Ensure the roots spread well
11. Fill the hole with soil and firm around the base of seedling to the level it was in the nursery
12. Apply mulch or erect a shade if necessary
13. Water the seedling thoroughly
14. Transplanting should be done on a cloudy day or late in the evening when it is not too hot.

*( Emphasis to be on flow of order)*

b. **Five factors that influence supply of cabbages in a market (10mks)**

1. Number the sellers in the market
2. Prices of related goods i.e. kales, spinach, manage etc.
3. Price expectation
4. Weather conditions
5. Change in prices
6. Increase in the supply of associated goods i.e. kales.
7. Cost of production
8. Transportation system
9. Government policy
10. Peace and security

( *Award for point and explanations)*

(c**) Ways in which farmers overcome risks and uncertainties in farming (5mks)**

1. Diversification
2. Insurance
3. Input rationing
4. Flexibility in production molding
5. Flexibility in production methods
6. Adopting modern methods of production (5mks)

**21(a). How soil loses fertility. (12mks)**

1. Soil erosion
2. Leaching
3. Monocropping
4. Continuous cropping
5. Burning vegetation cover
6. Change in soil PH
7. Accumulation of salts

*(Stating 1×6=6mks, correct explanation 1×6=6mks)*

**(b) Four problems associated with use of manure in agricultural production. (4mks**)

1. Bulkiness
2. Spread pests ,weeds and diseases
3. Laborious in application and transport
4. Loss of nutrients due to poor storage
5. Should be used if fully decomposed to avoid scorching crops
6. (first 4 points)
7. **Four characteristics of plants suitable for green manure. (4mks)**
8. highly vegetative /leafy
9. fast growth rate
10. quick rotting/decomposition
11. hardy / ability to tolerates poor soil conditions
12. High nitrogen content legumes

*(First 4 points)*

22. a) **Six advantages of mulching in crop production. (6 marks**)

1. prevents water evaporation thus maintaining moisture in the soil for crop use
2. act as an insulator thus modifies/ regulate soil temperature
3. controls soil erosion by reducing the speed of running water intercepting rain drops and increasing the rate of infiltration
4. controls the weeds by suppressing their growth
5. organic materials are decomposed by soil micro-organism resulting into humus that improves soil structure and water holding capacity.
6. organic materials improve soil fertility by releasing nutrients after decomposition

 *Any 6 x 1 = 6mks*

 **b) Six factors that should be considered when siting a nursery bed. (6 marks)**

1. Nearness to water source – for easy watering
2. Topography on gentle slope to prevent flood and erosion
3. Type of soil: well drained deep and fertile
4. Security – well protected from theft ad destruction by animals
5. Well sheltered place wind breaks are necessary to prevent strong winds
6. Previous cropping avoid areas where the same crop species had been planted to avoid buildup of pest/ diseases.

 *Stating* ½ mk

 *Explanation* ½ mk

 *Total 6 mks*

 **c) Biotic factors influencing agricultural production. (8 marks**)

*Pests*

* Feed on plant parts
* Transmit crop diseases
* Injure plant exposing the plant to secondary infection
* Increase cost of production

 *Parasite*

* Suck blood from animals
* Cause irritation
* Increase cost of production

 *Decomposer*

* Break down plant and animals materials to form manure

 *Pathogen*

* Cause diseases in livestock
* Reduce quality and quantity of agricultural products

 *Predators*

* Kill and feed on other animals
* Some reduce pest population

*(Any 8 points=8mks)*