

FROM 3 END TERM 2 AGRIC PAPER 1 M/SCHEME

Section A. (30mks)

1. Diseases that attack cabbages. (1.5 mks)

- i. Damping off
- ii. Black rot
- iii. Downy mildew

2. List four factors that causes loss in soil fertility. (2mks)

- i. Over cultivation
- ii. Overgrazing
- iii. Continuous use of agricultural chemicals
- iv. Through soil erosion
- v. Burning of vegetation cover to clear the land
- vi. Monocropping for a long period of time; over the years.

3. Reasons for seed selection in crop production. (2mks)

- i. To obtain seed suitable to ecological conditions
- ii. To obtain pure planting material
- iii. To increase germination percentage
- iv. To remove pests and diseases infected planting material.

4. Reasons why a well drained soil is suitable for tomato production .(2mks)

- i. Has improved soil structure
- ii. Has reduced leaching
- iii. Has improved water holding capacity
- iv. Has increased cation exchange capacity
- v. Has high micro organisms

5. Conditions that would necessitate irrigation. (1.5 mks)

- i. Inadequate rainfall
- ii. In reclaiming and semi arid land
- iii. In paddy rice
- iv. In green house

6. Four harmful effects of crop pest (2mks)

- i. Spread diseases to crops, since some are host to disease causing organisms
- ii. Some feed on leaves therefore reducing the production capacity of the crop
- iii. Some feed on the fruits therefore lowering its quality
- iv. Those that feed on grain reduce the production levels

7. Method of breaking seed dormancy in (1mks)

- a) Calliandar
 - i. Heat treatment/light burning
- b) Rice. (1mks)
 - ii. Soaking in cold water

8. Benefits of processing certificate of land ownership (title deed). (2mks)

- i. Can be used to secure credit/loan

- ii. Gives security of tenure
- iii. Encourages long term investment
- iv. Enables leasing of part or whole land.

9. State four advantages of communal land tenure system? (2mks)

- i. There is no land conflict since land belongs to everyone
- ii. No problem of landlessness
- iii. There is no land fragmentation
- iv. It allows free movement of livestock
- v. Land is sometimes left fallow to allow pasture to regenerate and regain utility.

10. Activities that a farmer should carry out on a storage facility before storing farm produce. (2mks)

- i. Clean
- ii. Check for any damage e.g. leaking roof and repairs
- iii. Clear the surrounding
- iv. Check the storage capacity
- v. Treat the store with appropriate pesticides/dusting
- vi. Check the security of the store and fire safety

11. Meaning of terms as used in fertilizer chemistry. (2mks)

- a. Fertilizer grade
Amount of each nutrients in a fertilizer bag of a given weight.
- b. Fertilizer
The relative proportion of nutrients in relation to one another

12. Climatic factors that influence crop production and distribution. (2mks)

- i. Temperature
- ii. Wind
- iii. Light
- iv. Rainfall
- v. Relative humidity

13. Ways in which land consolidation helps to improve farm management. (2mks)

- i. Saves time and money
- ii. Makes it easy to have a sound farm plan
- iii. Eases soil conservation
- iv. Ease supervision of farm
- v. Facilitates mechanization

14. Uses of organic manure in crop production (2mks)

- i. Conserves water
- ii. Reduces soil erosion
- iii. Suppress weeds
- iv. Improve soil structure upon decomposition
- v. Add fertility to soil after decomposition.

15. Definition of terms as used in crop production. (3mks)

- i. Weak fall plants in tomatoes – practice of supporting
- ii. Hardening off – practice of training seedlings to adapt the ecological conditions prevailing in the main seedbed

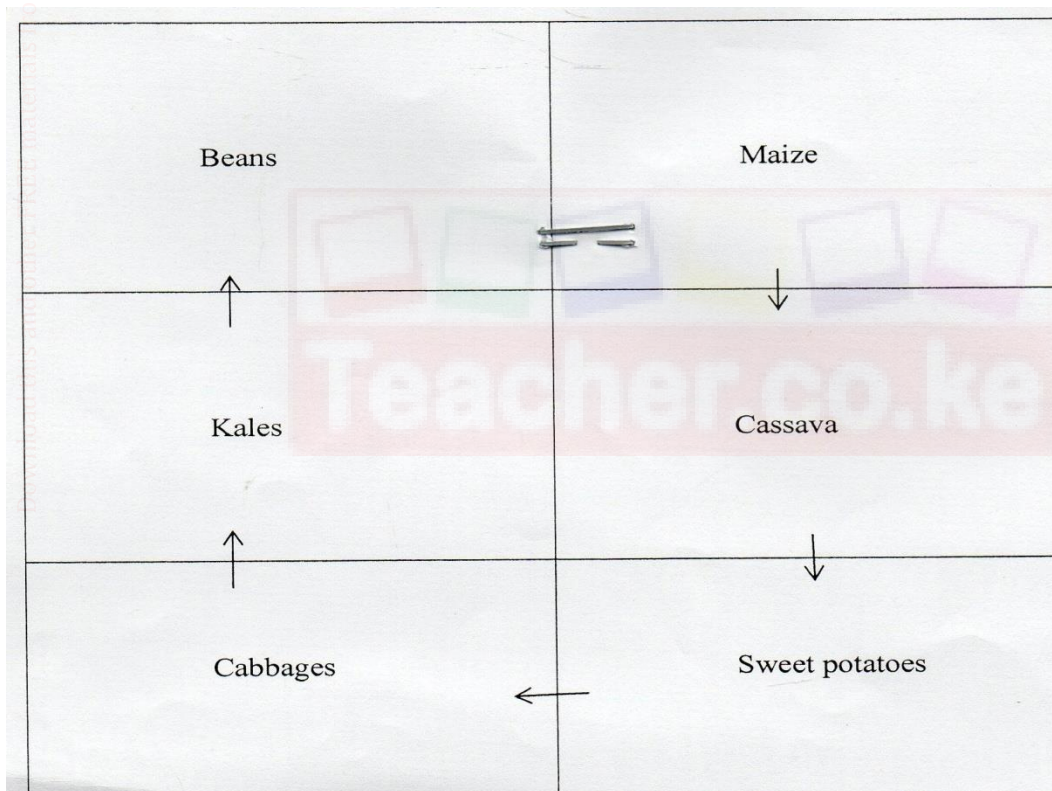
iii. Organic farming – growing of crops and rearing of animals without using agrochemicals

SECTION B 20 MKS

16. Naming the field practice.

- i. Trellising
- ii. Passionfruits
- iii. **Two reasons for carrying out the practice. (2mks)**
 - a) To obtain clean fruits
 - b) Easy harvesting, weeding
 - c) Easy penetration of light
 - d) Control soil borne tests and diseases
 - e) Easy penetration of spray

17a) The illustration below shows a cropping programme.



a) Identify the cropping programme (1mark)

Crop rotation

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

Plating kales after cabbage

c) 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 smother weeds.

- d) Advantages 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)

- i. Water nursery thoroughly before transplanting
- ii. Dig the planting holes at the appropriate depth
- iii. Only health and vigorously growing seedling are selected.

- iv. 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
- v. Transport the seedlings carefully to the field using appropriate means i.e. a wheelbarrow
- vi. Place insecticide in the hole to control soil borne pests such as nematodes
- vii. Add/tea spoonful of phosphate fertilizers to the planting hole, mix the fertilizers with the soil.
- viii. Add one handful of humus and also mix thoroughly with the soil
- ix. Transplant and place the seedling in the planting hole at the same depth they were in the nursery.
- x. Ensure the roots spread well
- xi. Fill the hole with soil and firm around the base of seedling to the level it was in the nursery
- xii. Apply mulch or erect a shade if necessary
- xiii. Water the seedling thoroughly
- xiv. 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)

- i. Number the sellers in the market
- ii. Prices of related goods i.e. kales, spinach, manage etc.
- iii. Price expectation
- iv. Weather conditions
- v. Change in prices
- vi. Increase in the supply of associated goods i.e. kales.
- vii. Cost of production
- viii. Transportation system
- ix. Government policy
- x. Peace and security
(*Award for point and explanations*)

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

- i. Diversification
- ii. Insurance
- iii. Input rationing
- iv. Flexibility in production molding
- v. Flexibility in production methods
- vi. Adopting modern methods of production (5mks)

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

- i. Soil erosion
- ii. Leaching
- iii. Monocropping
- iv. Continuous cropping
- v. Burning vegetation cover
- vi. Change in soil PH
- vii. Accumulation of salts

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

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

- i. Bulkiness
- ii. Spread pests, weeds and diseases
- iii. Laborious in application and transport
- iv. Loss of nutrients due to poor storage
- v. Should be used if fully decomposed to avoid scorching crops
- vi. (first 4 points)

(c) Four characteristics of plants suitable for green manure. (4mks)

- i. highly vegetative /leafy
 - ii. fast growth rate
 - iii. quick rotting/decomposition
 - iv. hardy / ability to tolerate poor soil conditions
 - v. High nitrogen content legumes
- (First 4 points)

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

- i) prevents water evaporation thus maintaining moisture in the soil for crop use
- ii) act as an insulator thus modifies/ regulate soil temperature
- iii) controls soil erosion by reducing the speed of running water intercepting rain drops and increasing the rate of infiltration
- iv) controls the weeds by suppressing their growth
- v) organic materials are decomposed by soil micro-organism resulting into humus that improves soil structure and water holding capacity.
- vi) 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)

- i) Nearness to water source – for easy watering
- ii) Topography on gentle slope to prevent flood and erosion
- iii) Type of soil: well drained deep and fertile
- iv) Security – well protected from theft and destruction by animals
- v) Well sheltered place wind breaks are necessary to prevent strong winds
- vi) 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)

