

FORM 2

AGRICULTURE

SECTION A (40 MARKS)

1. Name three forms of horticulture practiced in Kenya (3 mks)
- Floriculture
 - Olericulture
 - Pomoculture
2. List four problems associated with nomadic pastoralism in Kenya (4 mks)
- Draught / aridity
 - Diseases and parasites
 - Attack by wild animals
 - Soil erosion due to overstocking
 - Poor pasture species
 - Inadequate land
3. Give four biotic factors that influence agriculture negatively. (4 mks)
- Pests
 - Parasites
 - Pathogens
 - Predators
4. List four reasons why use of fire should be discouraged during land clearing. (4 mks)
- ❖ Destroys organic matter
 - ❖ Kills micro – organisms
 - ❖ Destroys plant nutrients
 - ❖ Leads to loss of moisture
 - ❖ Destroys soil structure
 - ❖ Destroys plant nutrients
 - ❖ Causes mineral imbalances
 - ❖ Leads to soil erosion

5. a). What is minimum tillage? (1 mk)

➤ Application of a combination of farming practices aimed at least disturbance of the soil

b). Give four reasons for practicing minimum tillage. (4 mks)

- ✓ Reduces the cost of cultivation
- ✓ Controls soil erosion
- ✓ Maintain soil structure
- ✓ Conserve moisture
- ✓ Prevent disturbance of roots and underground structures
- ✓ Prevent exposure of humus

6. List four methods used to drain farm land. (4 mks)

- Open ditches
- Underground drain pipes
- French drains
- Cambered beds
- Pumping
- Planting trees



7. State four roles of organic matter in sandy soil. (4 mks)

- Increases water holding capacity
- Improves soil structure
- Reduces leaching
- Increases microbial activity
- Improves nutrients status
- Moderates soil temperature
- Buffers the soil pH

8. State four physical characteristics of beef cattle. (4 mks)

- Blocky in shape
- Deep well fleshed
- Short strong legs
- Grow fast leading to early maturity
- Short thick neck
- Good foragers
- Breed regularly

9. Give four characteristics of nitrogenous fertilizers. (4 mks)

- ❖ Highly soluble
- ❖ Easily leached
- ❖ Short residual effect
- ❖ Scorching / burning effect
- ❖ Highly volatile
- ❖ Hygroscopic
- ❖ Highly corrosive

10. State four benefits of nursery bed in cabbage production. (4 mks)

- Production of many seedlings
- Ensures transplanting of healthy and vigorously growing
- Mature fast
- Source of income

SECTION B (20 MARKS)

11. The table below shows a format of a farm record.

Date	Amount sold	Price per unit (KShs)	Total value (KShs)	Where sold	Remarks

a). Name the farm record illustrated above. (1 mk)

- ✓ Marketing record

b). Give two uses of the farm record shown above (2 mks)

- Compare performance
- Show history
- Planning and budgeting
- Detect losses / theft
- Assessment of income tax
- Value of farm
- Easy to share profits and losses
- Settling disputes
- Shows whether is making profits or losses
- Supporting insurance claims
- Provide labor information

c). Name any other two farm records kept by the farmer (2 mks)

- Production
- Field operations
- Breeding
- Feeding
- Health
- Labour

12. The diagram below shows a soil sampling method

a). Identify the method (1 mk)

- Traverse

b). State two activities that are carried out during sampling in the field. (2 mks)

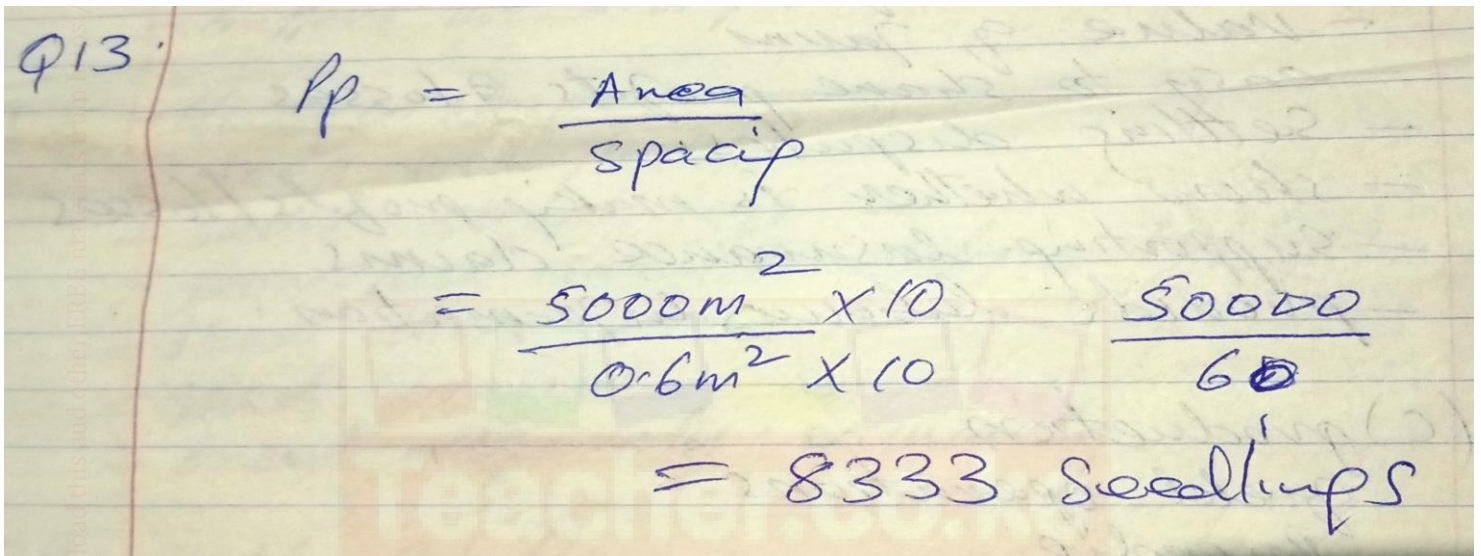
- ❖ Clearing vegetation and vertical cut 15 – 25cm crop and 5cm pasture
- ❖ Take a slice using spade / soil auger
- ❖ Put in clean container / polythene bag

- ❖ Repeat in several points
- ❖ Mix, dry and crush
- ❖ Take sub – sample and send to laboratory

c). What information should the sample have before being taken to the laboratory? (2 mks)

- Name and address of farmer
- Field number
- Date of sampling

13. Money maker variety of tomatoes are spaced at 100cm X 60cm. Calculate the number of plants which would be accommodated in a 0.5 Ha plot. (5 mks)



Q13.

$$Pp = \frac{\text{Area}}{\text{spacing}}$$

$$= \frac{5000m^2 \times 10}{0.6m^2 \times 10} = \frac{50000}{60} = 8333 \text{ seedlings}$$

14. K, N and M are diagrams of farm tools. Study them and answer the questions that follow.

a). Identify the farm tools K, N and M. (3 mks)

K – pipe cutter

N – Pipe wrench

M – stock and die

b). State the uses of M and N (2 mks)

M – holding, tightening and loosening metallic pipes

N – for cutting threads on pipes

SECTION C (40 MARKS)

15. a). State and explain five factors that influence spacing of crops. (10 mks)

- Growth habit – crops that tiller, spread, creep, tall require wider space
- Intended use – maize for silage is planted closer spacing than maize for grain
- Type of machinery to use – space required to allow passage
- Soil fertility – fertile soil requires closer spacing
- Moisture content – high moisture allow closer spacing
- Inter – planted crops – require wider spacing
- Pests control – properly space crop make difficult for pest to move i.e. aphids
- Disease control – wider spacing control certain fungal diseases
- Number of seeds planted per hole – more than one seed / plant per hole require wider spacing

b). Describe the process of chemical water treatment. (10 mks)

- ✓ Stage 1: Filtration at intake. Water passes through series of sieves trapping / huge particles
- ✓ Stage 2: Softening of water: Circulate in tank mixing chamber where it is mixed with soda ash to soften it.
- ✓ Stage 3: Coagulation and sedimentation: Alum added to facilitate sedimentation and coagulation, stays for 36 hours
- ✓ Stage 4: Filtration: Passes into filtration tank where solid particles are removed
- ✓ Stage 5: Chlorination: Enters chlorination tank where small amount of chlorine is added to kill disease agents
- ✓ Stage 6: Storage: Stored before entering distribution channels for use.

16. a). Explain five importance of keeping livestock in Kenya. (10 mks)

- Source of food / food supply i.e. meat, eggs, honey
- Source of income / capital – sold to earn income to farmer
- Source of raw materials for industry i.e. skin and hides, wool
- Source of employment – dairy farmers, veterinary officers
- Source of market for industrial goods i.e. acaricides, insecticides, feeds, drugs
- Source of power i.e. draught / pulling animals
- Source of foreign exchange – exported to earn foreign exchange
- Cultural uses – pay dowry, sacrifices, recreation, social ceremonies

b). Describe the use of various hand tools used by a carpenter.

(10 mks)

- Saws
- Tape measure
- Wood chisel
- Jack plane
- Wood / rasp file
- Try square
- Brace – bit
- Hand drill
- G – Clamp
- Sash / T – clamp
- Claw hammer
- Mallet
- Screw drivers

