

Section A (30 marks)

1. Give **two** ways in crop rotation helps in weed control.

(1 mk)

- Breaks life cycle of host specific weeds
- Alternate deep rooted and shallow rooted crops
- Alternating crops that are easy to weed with the one which difficult to weed.

2. Differentiate mixed cropping and intercropping.

(2mks)

Mixed cropping - growing different types of crops on the same piece of land at specific sections while intercropping growing different types of crops on the same piece of land together.

3. Give **four** advantages of intensive farming system.

(2mks)

- High yields
- Maximum use of resources
- High quality produce
- Suitable where land is limited

4. Name **three** practises that help to attain optimum crop population after planting.

(1 ½ mks)

- Thinning
- Gapping
- Weeding
- pest and disease control

5. Give **two** reasons why tsetse fly control considered a land reclamation process.

(1mk)

- Eliminates problem of nagana/sleeping sickness disease
- Minimizes cost of production
- makes place habitable for man

6. Explain how leaching leads to loss of soil fertility.

(1mk)

Moves nutrients to the lower horizon of the soil beyond root zones.

7. Outline **four** observable indicators of economic development of a nation.

(2mks)

- High per capita income
- Improved infrastructure
- Increased recreational facilities
- Efficient production methods

8. Give **four** methods of farming.

(2mks)

- Mixed farming
- Nomadic pastoralism
- Shifting cultivation
- Organic farming
- Agroforestry

9. State **four** factors that should be considered when selecting a crop to grow in an area.

(2mks)

- Size of land
- Climate
- Type of soil
- Capital availability
- Farmer's taste & preference
- Government policy

10. Identify **four** roles of calcium in crops.

(2mks)

- Help in grain formation
- Raising soil pH
- Help in plant cell formation

11. Give **two** benefits of using certified seeds.

(1mk)

- High yielding
- Free from diseases/pathogens

12. Give **four** benefits of tissue culture in crop propagation.

(2mks)

- Pathogen free
- Many propagules in a small space

13. Give **two** ways in which mulching helps in water conservation.

(1mk)

- Reduces the rate of evaporation
- Checks speed of runoff hence increased water infiltration in the soil.

14. Apart from tomatoes, name **four** examples of fruit vegetables.

(2mks)

- Watermelon
- Brinjal
- Pumpkins
- Butter nut

15. Distinguish hardening and hardening off as applicable in crop production.

(2mks)

Hardening - Removal (breaking) of the top of onions prior to harvesting while hardening off is removal of the shed and reduction in watering regime to make them ready for transplanting

16. Give **four** ways of improving labour productivity in the farm.

(2mks)

- Supervision
- Training
- Use of machines
- Proper remuneration
- Improvement of welfare NHIF, NSSF

17. What is production function.

(1mk)

Physical relationship between input and output.

18. Suggest **five** symptoms of viral infection in crops.

(2 ½ mks)

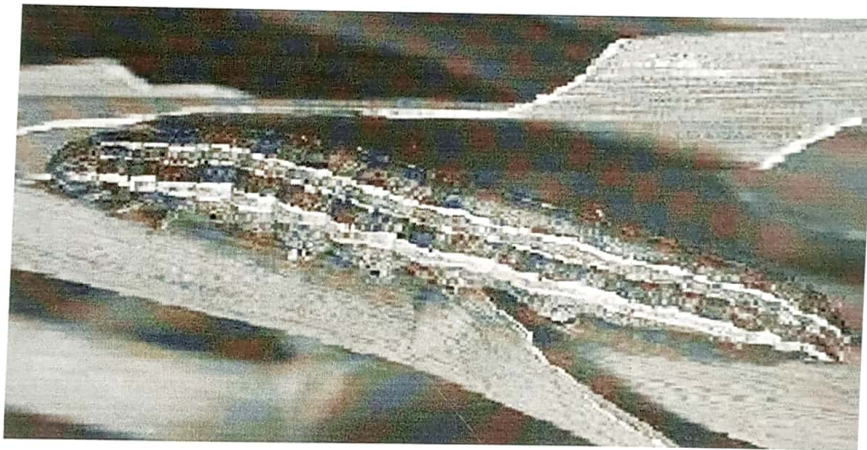
- chlorosis / yellowing of leave
- Leaf curling
- mosaics (light green or yellow patches)
- malformation (distortion)
- Rosetting

SECTION B 20 marks (Answer ALL the question in this section.)

19. The diagrams below illustrate field pest of maize. Study them and answer the question that follows.



A



B

a. Identify the pest labelled

(2 mks)

A maize stalk borer

B Army worm

b. Give one cultural method of controlling pest A

(1 mks)

- Field hygiene

- crop rotation

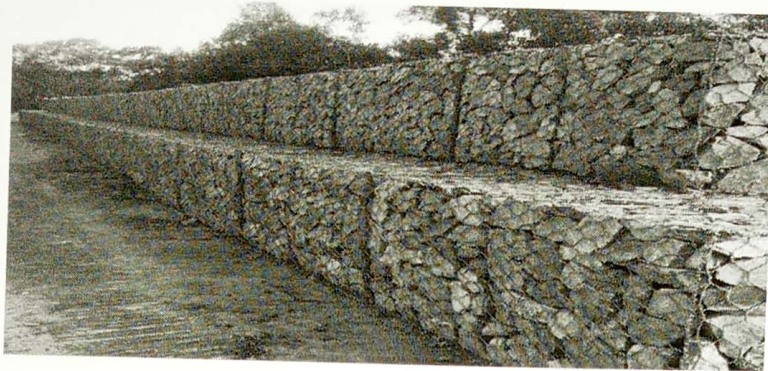
c. Give the damage caused by the pest B

(2 mks)

- Eats the leaves hence lowers the photosynthetic area

- Open wounds for secondary infection

20. Study the diagram below and answer the questions that follow.



a. Name the structure above

(1 mk)

Gabbions / potons dams

b. Give **two** ways in which the above structure helps in soil and water conservation. (2mks)

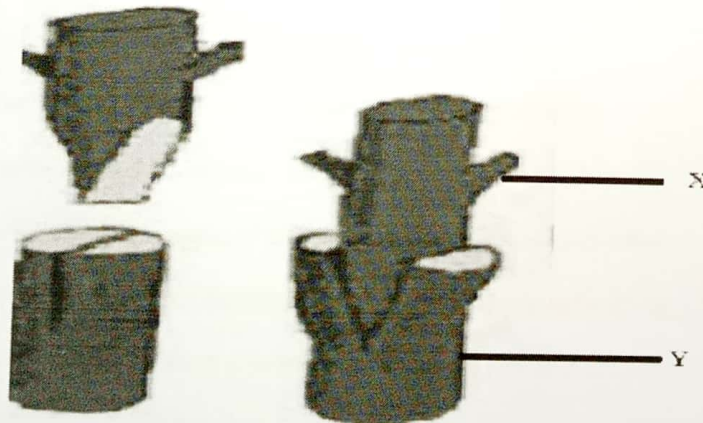
Traps eroded materials
Checks the speed of run off

c. State **two** reasons why the above structure is not commonly used as a soil conservation method.

(2 mks)

expensive / High costs
special skills required which may not be available

21. Below is an illustration of crop propagation. Study it and answer the questions that follow.



a. Identify the method of propagation above.

(1mk)

Whip / tongue grafting

b. Identify the parts labelled

(2 mks)

x. Scion

y. Root stock

b. Give **two** advantages of the propagation method.

(2 mks)

- Different compatible scions can be put on the same root stock
- Seedless crops can be propagated

22. The table below shows a format of a farm record. Study it and answer the questions that follow.

Date	Disease symptoms	Livestock affected	Drugs used	Cost of treatment	Remarks

a. Identify the record illustrated above.

(1 mk)

Health record

b. State **four** uses of the record illustrated above.

(4 mks)

- When to carry out management practices eg vaccination
- When culling
- Identify most prevalent diseases
- Cost of treatment
- When choosing breeding stock

Section C (40 marks) Answer any **two** questions from this section

23. a) State **five** causes of land fragmentation. (5 mks)

explan

b) State **five** factors that can encourage soil erosion. (10 mks)

c) State any **five** methods of harvesting agroforestry trees. (5 mks)

24. a) State and explain **four** ways of classification of herbicides. (8 mks)

b) State and explain any **six** human factors that influence agriculture. (12 mks)

25. a. Explain **five** ways in which a farmer can adjust to risk and uncertainties. (10 mks)

b. Discuss any five factors that promote the rooting of cuttings. (10 marks)

23a. causes of land fragmentation

- shifting cultivation
- Accumulation of land holding ^{buying}
- traditional system / inheritance
- Population pressure on limited area of land.
- Traditionally land may be offered to settle debts.

1x5 = (5marks)

(b) Five factors that encourage soil erosion

- High amount of rainfall ^{intensity}
- Steep slope
- Loose soil type / sandy soil
- Shallow depth
- Lack of vegetation
- Overstocking of livestock
- Deforestation
- Clean weeding
- ploughing up and down the slope.
- indiscriminate burning of vegetation
- planting annual crops on steep slopes

state 1x5 } = (10marks)
explain 1x5 }
~~5x2 = 10marks~~

(c) methods of harvesting agroforestry trees

- Lopping
- pollarding
- coppicing
- Thinning
- pruning

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1x5 = 5marks.

24a) Ways of classifying herbicides

- Formulation
- Time of application
- Selectivity
- mode of action
- Environmental factors

State $1 \times 4 = 4$ marks

Explanation $1 \times 4 = 4$ marks

b) six human factors that influence agriculture

- Level of education and technology
- Health
- Government policy
- Economy
- cultural and religious beliefs
- Transport and communication
- market forces

State $1 \times 6 = 6$ marks

Explanation $1 \times 6 = 6$ marks

12 marks

25a) Ways of adjusting to risks and uncertainty

- Diversification
- Selecting more certain enterprise
- Contracting
- Rationing inputs
- modern production techniques
- Insurance

State $1 \times 5 = 5$ marks

Explanation $1 \times 5 = 5$ marks

10 marks

- ② Factors that promote rooting of cuttings
- Relative humidity
 - Light intensity
 - Temperature
 - Rooting medium
 - Leaf surface area.

State $1 \times 4 = 4 \text{ marks}$

EXPLANATION $1 \times 4 = 4 \text{ marks}$

8 marks