

**MARKING SCHEME**

1. State **four** roles played by agriculture in national development. (4 marks)
- Food supply
  - Source of raw materials for industries
  - Employment opportunities
  - Foreign exchange earnings
  - Source of capital for development
  - Market for industrial goods.
2. (a) Mention **four** problems that have hindered agricultural development in Kenya. (4 marks)
- Lack of capital for investment
  - Pests and diseases of crops and livestock
  - Unpredictable climatic conditions
  - Fluctuation of market prices
  - Inadequate or poor storage structure leading to heavy lose
  - Inadequate technical knowhow
  - Population pressure hence overuse of land
  - Poor communication
  - Perishability
  - Bulky commodity prices
- (b) Suggest **four** ways in which the problems in 2(a) above can be alleviated. (4 marks)
- Proper food preservation
  - Improved communication network
  - Industries located near bulky products
  - Extension services/ advice
  - Provide good seeds
  - Credit facilities
  - Pest and disease control
  - Irrigation
  - Proper storage facilities
  - Government price control.
- 3.(a) State **four** features of shifting cultivation. (4 marks)
- Limited capital for investment
  - Use of rudimentary tools and equipment
  - Small land usually cultivated
  - Slash and burn technique of clearing
  - Crops not properly managed.
- (b) State four challenges associated with shifting cultivation. (4 marks)
- A wasteful method of farming
  - Slow rate of regeneration of vegetation allowing soil erosion to take place
  - No incentive to develop land
  - No permanent structures are put up hence a lot of time wasted in moving or travelling to the

**homestead**

**-A lot of time wasted in moving from one place to another.**

4. What is pastoralism? (1 mark)

**A major system of keeping livestock and moving with them from place of search of better pasture and water for livestock.**

5. Identify **four** factors to consider when choosing a type of farm. (4 marks)

**-Type of enterprise itself**

**-Environmental factors**

**-Knowledge and skills of the farmer about the enterprise**

**-Available resources e.g labour and capital**

**-Cultural factors/ social factors**

**-Governmental policy**

**-Type of market he is producing for.**

6. Define arable farming. (1 mark)

**Growing of crops only.**

7. State **four** advantages of mixed farming. (4 marks)

**-The farmer will obtain sustainable income throughout the year**

**-The farmer will never experience total loss**

**-Animals contribute manure to crops while crops contribute/ provide crop residues fed to animals.**

**-Labour is utilized efficiently throughout the year**

**-Animals can be used to do work in the farm**

8. Identify **two** types of farming practiced by large scale farmers. (2 marks)

**-Plantations**

**-Ranching**

9. Identify **three** aspects of rainfall which are important in crop production. (3 marks)

**-Reliability**

**-Distribution**

**-Intensity of rainfall**

**-Amount of rainfall**

10. (a) What is optimal temperature? (1 mark)

**Temperature at which plant growth is at its best.**

(b) Mention four effects of temperature on crop production. (4 marks)

**-Photosynthesis**

**-Respiration**

**-Flowering and ripening**

**-Quality of the products.**

11. Give **four** factors that influence the choice of tools for primary cultivation. (4 marks)

**-Type of soil**

**-Availability of implements**

**-Depth of ploughing**

**-Type of tith required**

**-Condition of the land**

**-Type of crop to be grown**

**-Topography of the area**

**-Financial ability of the farmer**

**-Time remaining before planting**

12. State **three** reasons why secondary cultivation is necessary. (3 marks)

**-Removing weeds which have just germinated break soil into small clods**

- Make the field level
- Mixing organic matter with soil
- Make land ready for planting..

13. Mention **three** factors that determine the number of tillage operations during seedbed preparations. (3 marks)

- Implement used/ type of machinery used
- The crop to be planted
- Soil moisture
- Initial condition of the land
- Soil type/ soil condition
- Skill of operator
- Liability of soil to erosion/ topography
- Capital available/ cost of operation
- Time available for other operations.

14. State two ways in which climate affects soil formation. (2 marks)

- *High temperature speed up the rate of chemical reactions.*
- *Wind acts as a transport agent and carries the weathered materials from one place to another.*
- *Rainfall provides water which is an important reagent during the weathering process.*

15. List any **four** details that a farmer should include in his health records of the animals. (2 marks)

- *Date*
- *Disease symptom*
- *Animals affected*
- *Drugs used*
- *Cost of treatment*
- *Remarks/comments*

16. (a) Define the term “subsoiling”. (1 mark)

*The process of cultivating the soil with the purpose of breaking up the hard pan.*

(b) Give **two** importance of sub soiling. (1 mark)

- **To break up the hard pan hence improving drainage.**
- **To improve soil aeration.**
- **To bring to the surface leached minerals.**
- **To improve root penetration.**

17. (a) What is soil? (1 mark)

**A collection of natural unconsolidated body covering the earth’s crust, where plants grow**

(b) In which **three** ways is soil is important to growing plants? (3 marks)

- Provides enchorage/ support for the plant
- Provides nutrients
- Provides moisture

(c) Highlight **four** factors which influence the soil forming process. (4 marks)

**-Climatic factors e.g rainfall**

**-Biotic factors e.g plants**

**-Type of parent materials**

**-Topography of land**

**-Time taken by the process.**

(d) Explain **three** biological agents influence the speed of the soil forming process. (3 marks)

**-Movement of animals in large groups**

**-Man's activities e.g cultivation, mining, road and railway construction.**

**-Micro-organisms ie. Decomposing plant and animal remains and adding to soil**

**-Earth worms, termites, moles etc mix up soil**

**-Roots of higher plants force their way through the rock cracks and further break them**

(e) List **four** constituents of a fertile soil.

(2 marks)

**-Soil water**

**-Soil air**

**-Organic matter**

**-Mineral salts**

**-Living organisms.**

(f) How important are the micro-organisms in the soil to the plants.

(2 marks)

**-Decompose dead organic remains and convert them into humus, a source of plant nutrients**

**-Add nitrogen through nitrogen fixation.**

(g) Mention **four** farming practices that improve soil structure.

(4 marks)

**-Addition of organic matter**

**-Fallowing**

**-Mixed cropping including cereals and legumes**

**-Minimum tillage**

**-Good crop rotation programme**

**-Cultivation at right moisture content of soil**

**-Liming.**