

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 tilth 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.