

**ASUMBI GIRLS HIGH SCHOOL**  
**POST -MOCK 1**  
**AUGUST/SEPTEMBER**  
**2022**

**AGRICULTURE PP1 MS**

**SECTION A 30 MARKS**

**ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED**

1.State three ways in which crop rotation improves soil fertility. (1<sup>1</sup>/<sub>2</sub>marks)

- ✓ Leguminous crops should be included to improve soil fertility
- ✓ Crops of different families should be alternated to discourage excessive soil borne pests and diseases
- ✓ Inclusion of grass ley to maintain a good soil structure

2.List four methods of farming. (2 marks)

- ✓ Mixed farming
- ✓ Nomadic pastoralism
- ✓ Shifting cultivation
- ✓ Organic farming
- ✓ agroforestry

3.Give four importance of cost as used in agricultural economics. (2 marks)

- ✓ used to calculate the gross margins
- ✓ used to indicate the most profitable level of production
- ✓ relates to production of a given quantity in a given period of time

4.List four factors a farmer considers when siting a nursery bed. (2 marks)

- ✓ well sheltered place
- ✓ well secured place
- ✓ previous cropping
- ✓ topography of the land
- ✓ nearest to the water source
- ✓ type of the soil

5. State four ways in which government policy contributes to agriculture. (2 marks)

- ✓ Subsidize the price of inputs to ensure production affordable
- ✓ Conservation of natural resources to ensure sustainability
- ✓ Imposition of high import tax to promote local products
- ✓ Stepping up to control diseases and prevent their spread
- ✓ Quality control to ensure effective competition in both local and international market

6.State four disadvantages of concession land tenure. (2 marks)

- ✓ If the management is insufficient big losses will be incurred
- ✓ Manner in which they organize are liable to labour and social problems
- ✓ Such companies engage in monopolistic practices
- ✓ Where ownership is foreign, the state is limited to employment creation and paying of taxes to the government.

7.Give four reasons why cereal grains should be dried before storage. (2 marks)

- ✓ To prevent germination under storage
- ✓ To prevent wet heating
- ✓ Prevent rotting of grains
- ✓ Reduce attack by storage pests

8.State three importance of cutting back in pyrethrum. (1<sup>1</sup>/<sub>2</sub>marks)

- ✓ To encourage fresh growth
- ✓ To improve yield in the next season
- ✓ To reduce incidences of bud diseases

9.Outline four observable indicators of economic growth of a country. (2 marks)

- ✓ Development of infrastructure
- ✓ Housing status of the citizen
- ✓ Increase of recreational facilities
- ✓ Ratio of teachers to students
- ✓ Improvement in the level of technology
- ✓ Number of patients per doctor

10.State four solutions that can help solve the problem of perishability in horticultural crops. (2 marks)

- ✓ Process the products
- ✓ Use cold stores
- ✓ Sell them immediately after production
- ✓ Harvest them when the weather is appropriate

11. Give four disadvantages of using organic manures in crop production. (2 marks)

- ✓ Spread diseases, pests and weeds
- ✓ Bulky to transport and apply
- ✓ Laborious in application and transportation
- ✓ Loses nutrients if poorly stored
- ✓ Do not benefit crops if used when not fully decomposed

12. State four ways in which chemical kills the weeds in the crop field. (2 marks)

- ✓ Inhibiting nitrogen metabolism
- ✓ Killing the cells
- ✓ Causing abnormal tissue development
- ✓ Inhibiting photosynthesis
- ✓ Inhibiting respiration

13. State four management practices that promote high herbage yields in pasture production. (2 marks)

- ✓ Topdressing
- ✓ Reseeding
- ✓ Topping
- ✓ Pest control
- ✓ Controlled grazing

14. Distinguish between seed dressing and seed inoculation. (2 marks)

- ✓ Seed dressing is coating the seeds with an appropriate pesticide to protect them against soil borne diseases and pests; seed inoculation is coating leguminous seeds with the right strain of rhizobium to stimulate nodulation.

15. State four agriculture support services available to a crop farmer (2 marks)

- ✓ Banking services
- ✓ Insurance services
- ✓ Tractor hire services
- ✓ Marketing services
- ✓ Credit services

16. State two precautions to be taken when harvesting cotton. (1 mark)

- ✓ Should not be harvested when wet
- ✓ Avoid placing harvested cotton in sisal bag
- ✓ Avoid mixing harvested cotton with leaves and twigs
- ✓ Pick weekly for maintenance of quality

## SECTION B 20 MARKS

### ANSWER ALL THE QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED

17. The diagram illustrated below shows a method of grafting. Study it carefully and answer the questions that follow.

a) Identify the type of grafting illustrated above. (1 mark)

- ✓ Whip grafting/tongue grafting

b) Name the parts named G1 and G2. (1 mark)

- ✓ G2 root stock
- ✓ G1 scion

c) State three advantages of grafting in agroforestry. (3 marks)

- ✓ The farmer is able to get different fruits from the same root stock
- ✓ Enables the farmer to propagate seedless crops
- ✓ Enables repair of damaged plant parts
- ✓ Hastens maturity rate of crops

18. The diagram illustrated below shows a DAP fertilizer bag. Study it carefully and answer the questions that follow.

a) What do the figures labelled on the diagram stand for. (1 mark)

- ✓ 18% N, 46% P<sub>2</sub>O<sub>5</sub>, 0% K<sub>2</sub>O

b) With a reason name the class of inorganic fertilizer that DAP belong. (2 marks)

- ✓ Incomplete compound fertilizer,
- ✓ Reason; contains only two primary macro-nutrient

c) Calculate the amount of filler material in 200 kg of DAP with a fertilizer grade of 18:46:0. (2 marks)

$$18+46=64$$

$$200-64=135 \text{ kg filler material}$$

19. The diagrams illustrated below show common weeds. Use them to answer the questions that follow.

a) Identify the weeds labelled C and D. (2 marks)

- ✓ C couch grass
- ✓ D wondering jew

b) Classify the weed labelled C according to plant morphology. (1 mark)

- ✓ Narrow leaved weed

c) Give one reason why it is difficult to control the weed labelled D. (1 mark)

- ✓ Remains under the soil viable for a long time
- ✓ Ability to propagate vegetatively

d) Name the appropriate category of herbicide used to control weed labeled C. (1 mark)

- ✓ Systemic herbicide

20. The diagram illustrated below shows an activity carried out in agroforestry. Study it carefully and answer the questions that follow.

a) Identify the activity illustrated above. (1 mark)

- ✓ Root pruning/root trimming

b) State two reasons for carrying out the activity identified above. (2 marks)

- ✓ To reduce root damage during transplanting
- ✓ To make lifting of seedlings easy

c) Name two tools that may be used to carry out the activity illustrated above. (2 marks)

- ✓ Piano wire
- ✓ panga

**SECTION C 40 MARKS**

**ANSWER ONLY TWO QUESTIONS IN THIS SECTION IN THE SPACES PROVIDED AFTER THE QUESTIONS**

21. a) The following information was found in Mr. Kamau's farm record for the year ending December 2014. Study it carefully and answer the questions that follow.

Bought goats	4,000
Bought poultry	15,000
Bought dairy meal	25,000
Bought pasture seeds	50,000
Transportation of farm produce	15,000
Paid casual workers	12,000
Hired an ox-plough	10,000
Opening valuation	150,000
Sale of mohair	75,000
Sale of rabbits	36,000
Sold dairy cow	70,000
Received cash from the sale of wheat	100,000
Sold cabbages	20,000
Received money from the sale of eggs	15,000
Closing valuation	200,000

i) Prepare a profit and loss account for Mr. kamau's farm. (7 marks)

MR KAMAU'S FARM

PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDING DECEMBER 2014

Purchases and expenses	Sales and receipts
Opening valuation 150,000	Sale of mohair 75,000
Bought goats 4,000	Sale of rabbits 36,000
Bought poultry 15,000	Sold dairy cow 70,000
Bought daily meal 25,000	Sale of wheat 100,000
Bought pasture seeds 50,000	Sold cabbages 20,000
Paid for transportation of farm produce 15,000	Sale of eggs 15,000
Hired an ox-plough 10,000	Closing valuation 200,000
Paid casual workers 12,000	
Total 281,000	
Profit 235,000	Total 516,000
516,000	516,000

ii) Did he make a profit or loss. (1 mark)

✓ profit of 253,000

iii) Calculate the percentage profit or loss that Mr. Kamau made. (2 marks)

✓  $235,000 \div 281,000 \times 100 = 83.6\%$

b) Outline five functions of Kenya National Federation of producers in Kenya. (5 marks)

✓ Bargaining for better prices of farm produce

- ✓ Ensuring adequate and timely supply of farm produce
- ✓ Bargaining for reasonable and affordable prices of human inputs
- ✓ Publishing monthly magazine known as 'farmers' voice
- ✓ Offering technical services to farmers
- ✓ Provision of better infrastructure
- ✓ Provision of loan facilities
- ✓ Adequate control of crop and livestock pests and diseases
- ✓ Looking for markets of farm produce both locally and overseas
- ✓ Representing Kenya farmers in the international federation of agricultural products

c) Explain five effects of solifluction. (5 marks)

- ✓ Soil fertility-materials derived from fertile origins end up in different destination
- ✓ Creation of lakes-blocks of rocks have dammed river courses forming temporary lakes
- ✓ Damaging property and causing loss of life
- ✓ Cause soil erosion on steep slopes
- ✓ Permanent scars on landscape
- ✓ Forms tourist attraction eg weeping rocks

22.a) Explain eight factors that influence the type of irrigation to be used in a farm. (8 marks)

- ✓ Topography of the land
- ✓ Soil type
- ✓ Type of crop to be irrigated
- ✓ Amount of water available
- ✓ Distance of the source of water to the field
- ✓ Capital available, skill available
- ✓ Climate factors of the area

b) Outline five importance of draining agricultural land. (5 marks)

- ✓ It facilitates leaching of harmful minerals
- ✓ Improves aeration of the soil
- ✓ Raises the soil temperature
- ✓ Increases activity of micro-organisms in the soil due to improved aeration
- ✓ Reduces the run-off water thus lowering the rate of soil erosion
- ✓ Increases the soil volume
- ✓ Reduces incidences of livestock diseases such as foot rot

c) Explain seven safety precautions observed when spraying herbicides. (7 marks)

- ✓ Wear protective clothing such as gloves overalls and boots
- ✓ Avoid inhaling herbicides by not smoking while spraying
- ✓ Read manufacturer's instructions and following them strictly
- ✓ Avoid sucking blocked nozzles



- ✓ Wash thoroughly immediately after handling the herbicides
- ✓ Keep the herbicides safely out of reach of children
- ✓ Do not wash the equipment used for herbicides in water sources
- ✓ Avoid chemical spillage in water sources
- ✓ Avoid handling food before washing

23a) Explain ten functions of agricultural marketing. (10 marks)

- ✓ Carrying out advertising of farm products to increase demand
- ✓ Provide capital to carry out agricultural activities
- ✓ Transportation of farm products to areas of consumption
- ✓ Storage of farm produce after harvesting to minimize losses
- ✓ Selling farm produce on behalf of farmers
- ✓ Packing farm produce to reduce storage space and make transportation easier
- ✓ Process farm produce to provide a variety and increase their value and prolong shelf life
- ✓ Buying farm produce from producers
- ✓ Grading farm produce to provide uniform standard and cater for various consumer
- ✓ Protection of farm produce from damage by use of production for bulking and transport

b) Explain five factors that should be considered when deciding the depth of planting seeds. (5 marks)

- ✓ Size of the seed-small seeds shallow depth for seed to emerge above the ground
- ✓ Soil moisture-high soil moisture requires shallow depth for germination and growth
- ✓ Type of germinating-cotyledons above the ground shallow depth to enable plant to push cotyledon above the ground
- ✓ Soil type-seeds emerge faster from soils with shallow depth
- ✓ Possibility of pest attack- deep planting prevent attack by pests

c) Outline five characteristics of a green manure crop. (5 marks)

- ✓ Should be highly vegetative
- ✓ Should be able to rot fast
- ✓ Should be able to fix nitrogen
- ✓ Should be able to grow in less fertile soil
- ✓ Should be able to complete life cycle in a short time
- ✓ Should be able to grow fast
- ✓ Should be healthy