

4.7 AGRICULTURE (443)

4.7.1 Agriculture Paper 1 (443/1)



MANYAM FRANCHISE
Discover! Learn! Apply

SECTION A (30 marks)

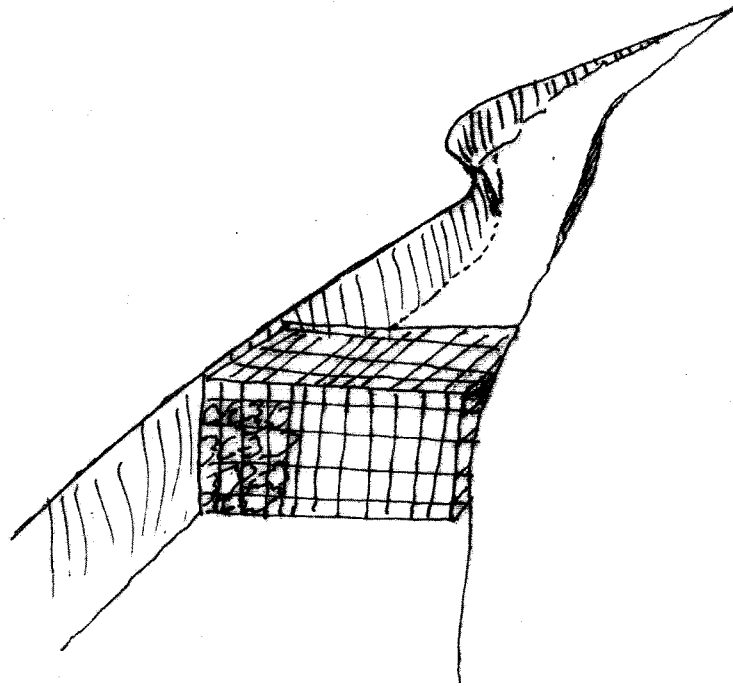
Answer **ALL** the questions in this section in the spaces provided.

- 1 Name the part harvested for each of the following crops:
 - (a) onions(½ mark)
 - (b) carrots.....(½ mark)
 - (c) coffee(½ mark)
- 2 State **four** biotic factors that influence crop production. (2 marks)
- 3 Name **four** methods of controlling crop pests. (2 marks)
- 4 State **four** ways of harvesting water on the farm. (2 marks)
- 5 Name **four** farm records that should be kept by a poultry farmer. (2 marks)
- 6 State **four** disadvantages of using organic manure in crop production. (2 marks)
- 7 Give **two** ways in which pastures are classified. (1 mark)
- 8 State **four** disadvantages of organic mulches. (2 marks)
- 9 Give **five** advantages of practising crop rotation. (2½ marks)
- 10 State **two** advantages of earthing up in crop production. (1 mark)
- 11 Give **four** harmful effects of weeds on crop production. (2 marks)
- 12 State **three** advantages of shifting cultivation. (1½ marks)
- 13 Give **five** advantages of zero grazing in dairy farming. (2½ marks)
- 14 State **four** factors that determine the stage at which a crop is harvested. (2 marks)
- 15 State **four** ways in which land reform can be implemented in Kenya. (2 marks)
- 16 Give **four** factors that influence the number of secondary cultivations in seedbed preparation. (2 marks)

SECTION B (20 marks)

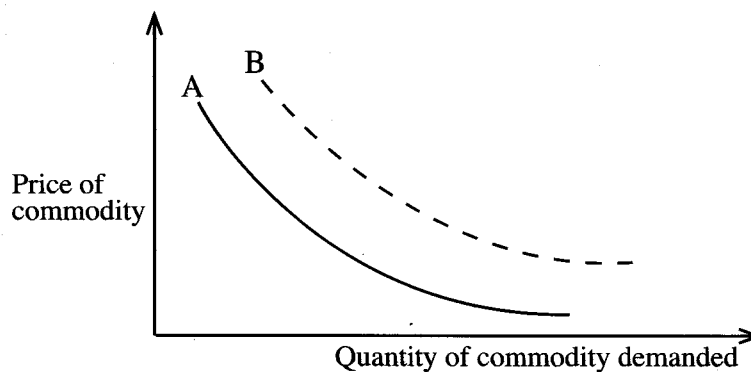
Answer **ALL** the questions in this section in the spaces provided.

- 17 The illustration below shows a structure used for controlling soil erosion. Study it carefully and answer the questions that follow.



- (a) Identify the structure. (1 mark)
- (b) Explain **two** ways in which the structure helps to control soil erosion. (2 marks)

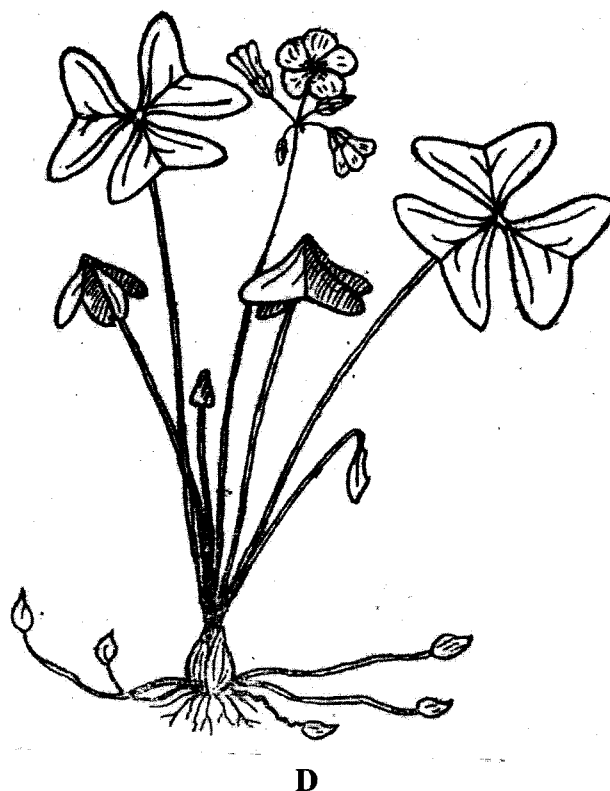
- 18 The diagram below illustrates the law of demand in agricultural marketing. Study it and answer the questions that follow.



- (a) Give a reason for the shape of the curve labelled **A**. (1 mark)
- (b) If the price of the commodity remains constant, explain **three** factors that can cause the curve to shift from **A** to **B**. (3 marks)

19

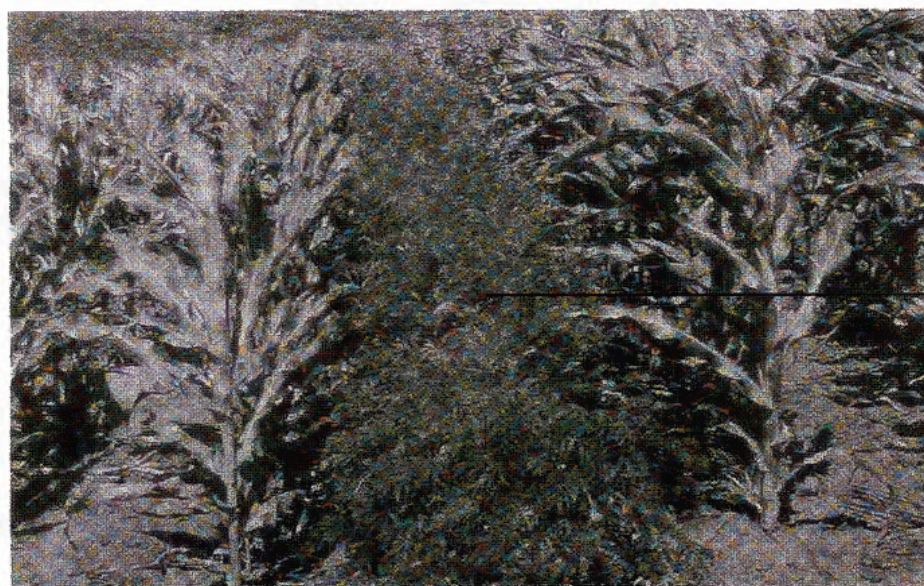
The diagrams below illustrate common weeds in arable land. Study them carefully and answer the questions that follow.



- (a) Identify the weed labelled **D**. (1 mark)
- (b) Classify the weed labelled **C** according to plant morphology. (1 mark)
- (c) Give **one** reason why it is difficult to control the weed labelled **D**. (1 mark)

20

The diagram below illustrates an agroforestry practice. Study it and answer the questions that follow.

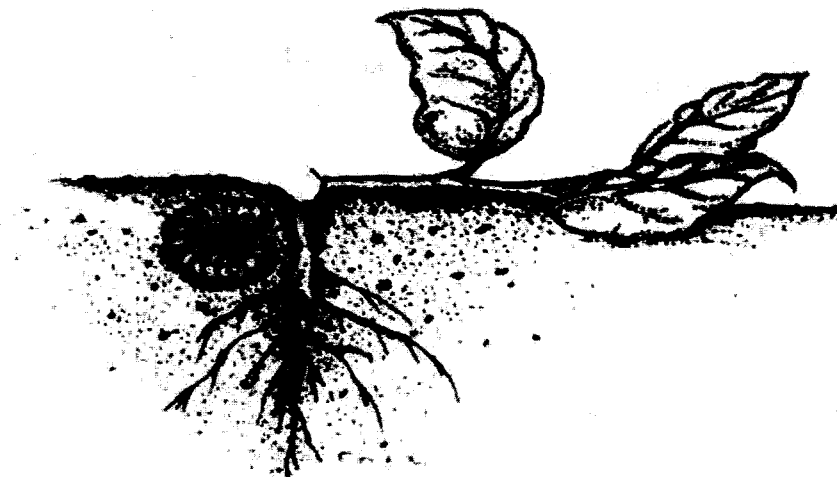


Calliandra

(a) Identify the agroforestry practice illustrated above. (1 mark)

(b) Explain **three** benefits of the practice illustrated above. (3 marks)

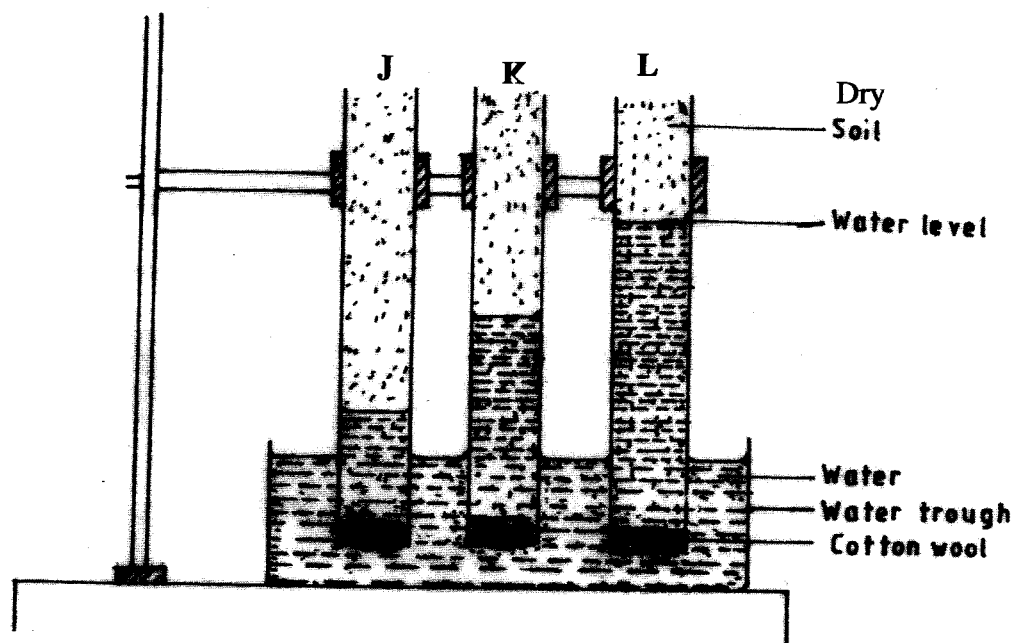
21 The diagram below shows a pest and the damaged crop. Study it and answer the questions that follow.



(a) Identify the crop pest illustrated above. (1 mark)

(b) Explain **two** ways of controlling the pest. (2 marks)

22 The diagram below illustrates an investigation on a property of soil using soil samples labelled J, K and L.



(a) If the levels of water shown in the diagram were observed after three hours, name the property of soil being investigated. (1 mark)

(b) What is the relationship between the soil property named in (a) above and the size of soil particles? (1 mark)

(c) Which soil sample would be suitable for growing paddy rice? (1 mark)

SECTION C (40 marks)

Answer any TWO questions from this section in the spaces provided after question 25.

- 23** (a) Explain **five** factors that should be considered in farm planning. (10 marks)
- (b) Describe the transplanting of tomato seedlings. (10 marks)
- 24** (a) Explain **five** factors that should be considered when siting a vegetable nursery. (5 marks)
- (b) Explain **six** factors that should be considered when selecting seeds for planting. (6 marks)
- (c) Explain the different ways in which each of the following environmental factors influence crop production:
- (i) temperature; (4 marks)
- (ii) wind. (5 marks)
- 25** (a) Outline the information contained in a Purchase Order. (5 marks)
- (b) Describe the harvesting of tea. (6 marks)
- (c) Explain the importance of irrigation in crop production. (5 marks)
- (d) Describe the role of magnesium in crop production. (4 marks)

4.7.2 Agriculture Paper 2 (443/2)

SECTION A (30 marks)

Answer all the questions in this section in the spaces provided.

- 1 Apart from hides and skins, name the raw material obtained from each of the following livestock for the textile industry:
 - (a) goat(½ mark)
 - (b) sheep (½ mark)
 - (c) rabbit (½ mark)
- 2 Give three reasons for candling eggs in poultry production. (1½ marks)
- 3 Name two nutritional diseases of cattle. (1 mark)
- 4 State two advantages of housing calves singly in cattle management. (1 mark)
- 5 Give four features of housing that help to control livestock diseases. (2 marks)
- 6 Name three methods of harvesting fish in a pond. (1½ marks)
- 7 State five methods of dehorning in cattle management. (2½ marks)
- 8 Give the appropriate term that refers to each of the following:
 - (a) castrated chicken (½mark)
 - (b) young one of a rabbit (½ mark)
 - (c) mature male goat. (½ mark)
- 9 Give three ways in which farmers market beef cattle in Kenya. (1½ marks)
- 10 State four causes of egg eating in a flock of layers. (2 marks)
- 11 Name two practices that are carried out when preparing ewes for mating. (1 mark)
- 12 Give four reasons for identification in cattle management. (2 marks)
- 13 State three advantages of fold system in poultry rearing. (1½ marks)
- 14 State four practices that immediately come after complete milking in a milking shade. (2 marks)

15 The following is a list of livestock diseases.

- brucellosis
- trypanosomiasis
- newcastle
- anthrax
- african swine fever
- black quarter.

Which two diseases are

(a) both bacterial and zoonotic? (1 mark)

(b) caused by virus? (1 mark)

16 State three functions of a lubrication system on a tractor. (1½ marks)

17 Distinguish between the following terms as used in livestock health:

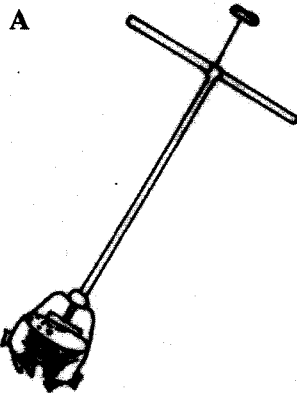
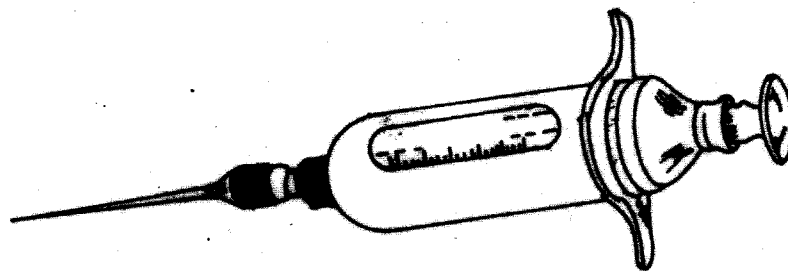
(a) isolation and quarantine; (2 marks)

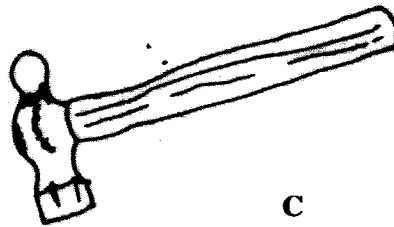
(b) curative drug and prophylactic drug. (2 marks)

SECTION B (20 marks)

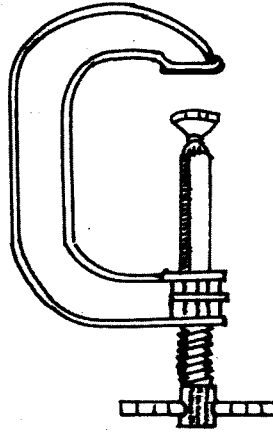
Answer ALL the questions in this section in the spaces provided.

18 Below are illustrations of farm tools and equipment.





C



D

- (a) Identify the tool/equipment labelled A and B. (1 mark)
 A (1 mark)
 B (1 mark)
- (b) State one appropriate use of the tool labelled C. (1 mark)
- (c) Explain two maintenance practices for the tool labelled D. (2 marks)

19 The diagram below illustrates a livestock parasite.



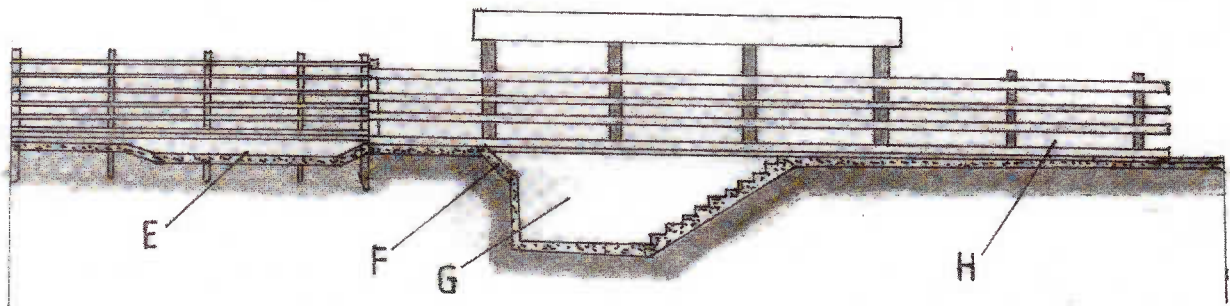
- (a) Identify the parasite illustrated above. (1 mark)
- (b) State the major harmful effect of the parasite. (1 mark)
- (c) Explain four control measures for the parasite. (4 marks)

20 The photograph below illustrates a method of identification labelled X in cattle.



- (a) Name the identification method. (1 mark)
- (b) Explain three disadvantages of the identification method. (3 marks)

21 The illustration below shows a cross section of a cattle dip.



- (a) Name the parts labelled E and G.
 - E(1 mark)
 - G(1 mark)
- (b) State one use for each of the parts labelled E, F, and H. (3 marks)
 - E
 - F
 - H

SECTION C (40 marks)

Answer any **TWO** questions from this section in the spaces provided after question 24.

- 22 (a) Describe the functions of the various types of pens in a piggery unit. (4 marks)
- (b) Describe the control measures for tapeworms(*Taenia spp*) in livestock. (6 marks)
- (c) Giving a relevant example in each case, describe the role of the various components of a balanced diet in livestock nutrition. (10 marks)
- 23 (a) Describe the management of one day old chicks in a brooder until they are eight weeks old. (12 marks)
- (b) Give the reasons why embryo transfer use should be encouraged in dairy cattle breeding. (8 marks)
- 24 (a) Describe foot rot disease under the following sub-headings:
- (i) causal organism; (1 mark)
- (ii) signs of infection; (5 marks)
- (ii) control measures. (4 marks)
- (b) Explain the importance of each of the functional differences between a disc plough and a mouldboard plough in land preparation. (10 marks)