

### 3.15 AGRICULTURE (443)

#### 3.15.1 Agriculture Paper 1 (443/1)

#### SECTION A ( 30 marks)

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

- 1 State **four** reasons for intercropping. (2 marks)
- 2 Give **four** advantages of intensive farming. (2 marks)
- 3 Give **four** reasons why land should be prepared early in readiness for planting. (2 marks)
- 4 State **four** reasons for deep ploughing during land preparation. (2 marks)
- 5 State **two** conditions that must exist for a market to be purely competitive. (1 mark)
- 6 Distinguish between grading and standardization in agricultural marketing. (2 marks)
- 7 State **four** benefits of agroforestry to a maize crop. (2 marks)
- 8 Distinguish between intensive hedgerow and border planting forms of agroforestry. (2 marks)
- 9 What is meant by each of the following terms: (3 marks)
  - (a) mixed cropping
  - (b) monocropping (C) intercropping.
- 10 State **four** advantages of timely planting. (2 marks)
- 11 State **four** advantages of row planting in crop production. (2 marks)
- 12 State **four** reasons why a nursery is important in crop production. (2 mark)
- 13 Distinguish between monopoly and monopsony. (2 marks)
- 14 Name the plant part used for vegetative propagation of each of the following plants:
  - (a) cassava (1/2 mark)
  - (b) sisal (1/2 mark)
  - (c) pyrethrum (1/2 mark)
  - (d) sweet potatoes. (1/2 mark)
- 15 State **four** characteristics of a good vegetable seedling. (2 marks)

**SECTION** (20 marks)

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

**16** The photograph below illustrates a method of irrigation.



- (a) Identify the method of irrigation illustrated above. (1 mark)
- (b) State **two** maintenance practices that are carried out on the equipment used in the method illustrated above. (2 marks)
- (c) Give **one** advantage drip irrigation has over the method of irrigation illustrated above in crop disease control. (1 mark)

**17** The table below shows a format of a farm record.

Date	Disease Symptom	Livestock affected	Drugs used	Cost of treatment	Remarks

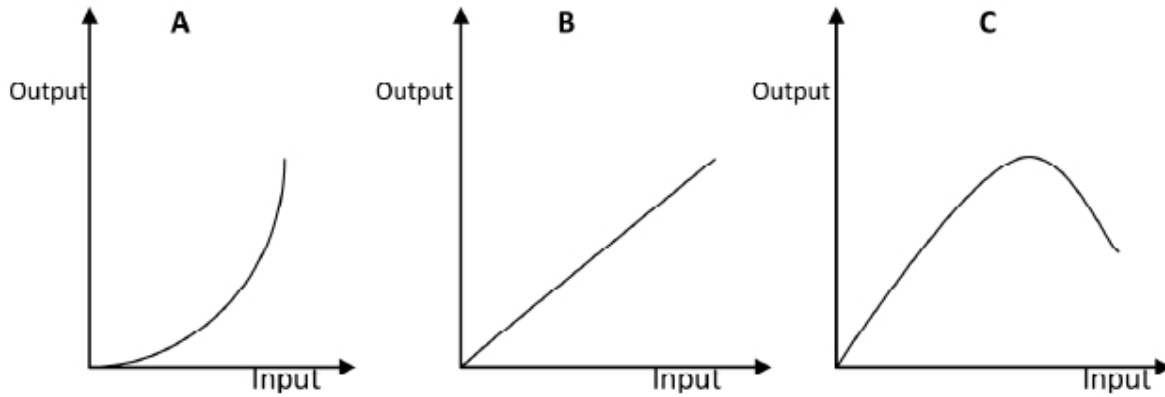
- (a) Name the farm record illustrated above. (1 mark)
- (b) Give **two** uses of the farm record shown above. (2 marks)

**18** The table below represents an account in a financial book of a poultry farmer.

POULTRY							
DR				CR			
Date	Particulars	Folio	Amount	Date	Particulars	Folio	Amount

- (a) Identify the financial book. (1 mark)
- (b) On 10th January 2011, the poultry farmer bought 5 bags of layers mash worth Ksh. 10 000/- and sold 100 trays of eggs for Ksh. 20 000/- on 10 January 2011. Enter these transactions in the account above. (3 marks)

**19** The following illustrations show different production function curves in agricultural economics. Study them and answer the questions that follow.



(a) Identify the production function curves labelled **A** and **B**. (2 marks)

**A** .....

**B** .....

(b) What does the law derived from the production function labelled **C** state? (1 mark)

(c) (i) Which **one** of the three production function curves is rare in Agriculture? (1 mark)

(ii) Give a reason for your answer in (c)(i) above. (1 mark)

**20** The following is a list of plant nutrients; Copper, Calcium, Nitrogen, Molybdenum, Zinc, Phosphorus, Carbon, Sulphur, Iron and Magnesium.

Which of the above plant nutrients are:

(a) macro-nutrients (1 mark)

(b) micro-nutrients (1 mark)

(c) fertilizer elements (1 mark)

(d) liming elements. (1 mark)

**SECTION C** (40 marks)

*Answer any **two** questions from this section in the spaces provided after question 23.*

**21** (a) Explain **eight** cultural methods of soil and water conservation. (8 marks)

(b) Explain **four** ways in which:

(i) HIV/AIDS limits agricultural production (4 marks)

- (ii) government policy improves agricultural production (4 marks)
- (iii) low level of education and technology influences agriculture. (4 marks)
- 22** (a) Explain **seven** physical methods of pest control. (7 marks)
- (b) Explain **eight** factors that contribute to the competitive ability of weeds. (8 marks)
- (c) Describe the harvesting of coffee. (5 marks)
- 23** (a) Describe the preparation and handling of stem cuttings when planting napier grass. (5 marks)
- (b) Describe the production of onions under the following sub-headings:
- (i) seedbed preparation (3 marks)
- (ii) field management (4 marks)
- (iii) harvesting. (3 marks)
- (c) Give **five** reasons why land consolidation should be encouraged in Kenya. (5 marks)

### 3.15.2 Agriculture Paper 2 (443/2)

#### SECTION A (30 marks)

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

- 1 State **four** ways of controlling lice in poultry. (2 marks)
- 2 State **three** signs of heat observed in rabbits. (1½ marks)
- 3 Name **three** methods of extracting honey from combs. (1½ marks)
- 4 State **three** signs of broodiness in a hen. (1½ marks)
- 5 Give the **main** reason for each of the following in dairy farming: (1½ marks)
  - (a) milking quickly and evenly;
  - (b) milking at regular times;
  - (c) complete milking.
- 6 State **four** factors that stimulate milk let-down in a lactating cow. (2 marks)
- 7 State **four** signs of infestation by external parasites in goats. (2 marks)
- 8 Give **four** disadvantages of inbreeding in livestock production. (2 marks)
- 9 State **four** advantages of fish farming in Kenya. (2 marks)
- 10 Give **two** reasons for castration in piglets. (1 mark)
- 11 Name **two** practices that are carried out on eggs in preparation for marketing. (1 mark)
- 12 State **two** precautions that should be observed when shearing sheep to ensure production of high quality wool. (1 mark)
- 13 Name **four** parts of a farm building that can be reinforced using concrete. (2 marks)
- 14 State **four** factors that can affect digestibility of a feedstuff in livestock. (2 marks)
- 15 State **two** causes of soft shelled eggs. (1 mark)
- 16 Give **four** characteristics of a good site for a fish pond. (2 marks)
- 17 State **four** disadvantages of fold system in poultry rearing. (2 marks)
- 18 Name **four** methods of docking in sheep rearing. (2 marks)

SECTION B (20 marks)

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

- 19 Below are photographs showing parts of a ruminant stomach. Study them and answer the questions that follow.



A



C



B



D

- (a) Identify the parts labelled A and B (2 marks)

A.....

B.....

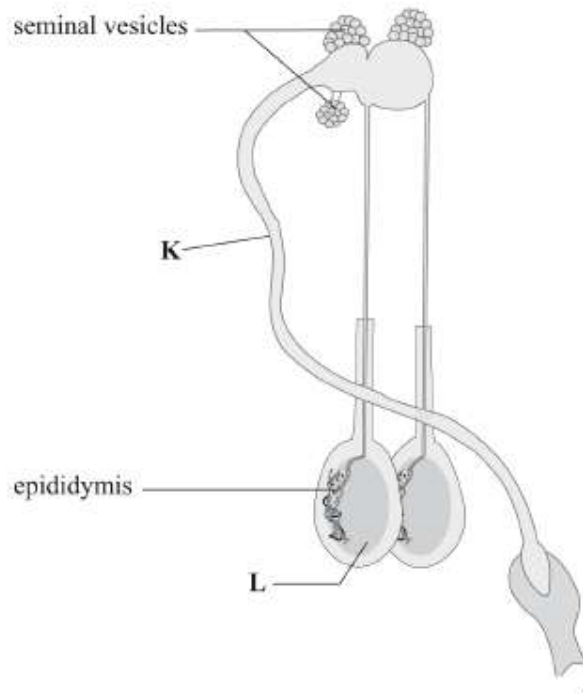
- (b) State **one** function of the part labelled

A..... (1 mark)

C..... (1 mark)

- (c) Name **one** enzyme that is produced in the part labelled D. (1 mark)

- 20 Below is a diagram illustrating the reproductive system of a bull. Study it and answer the questions that follow.



- (a) Identify the parts labelled

**K**..... (1 mark)

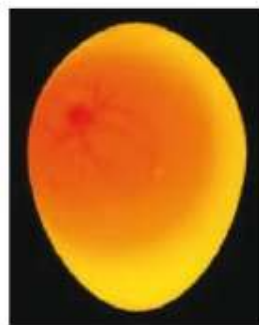
**L**..... (1 mark)

- (b) State the function of the part labelled

Epididymis ..... (1 mark)

Seminal vesicles ..... (1 mark)

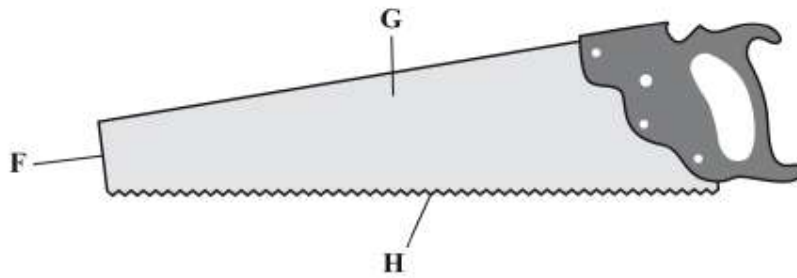
- 21 Below is a photograph showing an egg being candled. Study it and answer the questions that follow.



- (a) Why is candling important in poultry farming? (1 mark)

- (b) What changes will be observed on the same egg if it was candled on the 18th day of incubation? (2 marks)

22 The following is an illustration of a handsaw. Study it carefully and answer the questions that follow.



- (a) Name the parts labelled
- F ..... (1 mark)
- G ..... (1 mark)
- (b) Explain **three** maintenance practices that should be carried out on the part labelled H. (3 marks)

23 Below is a diagram illustrating a farm implement. Study it and answer the questions that follow.



- (a) Identify the implement illustrated above. (1 mark)
- (b) State the use of the:
- (i) implement on the farm; (1 mark)
- (ii) part of the implement labelled J. (1 mark)



**SECTION C (40 marks)**

*Answer any TWO questions from this section in the spaces provided after question 26.*

- 24** (a) Give **five** reasons for keeping livestock healthy. (5 marks)
- (b) Describe the symptoms of roundworm infestation in livestock. (7 marks)
- (c) Describe the control measures for cannibalism in layers. (8 marks)
- 25** (a) Describe the body conformation features of a dairy heifer. (5 marks)
- (b) State the disadvantages of using live fences on a farm. (7 marks)
- (c) Describe how a four-stroke cycle petrol engine works. (8 marks)
- 26** (a) Describe the disease control routine management practices in calf rearing. (7 marks)
- (b) Describe contagious abortion (Brucellosis) disease under the following sub-headings:
- (i) causal organism; (1 mark)
- (ii) animals affected; (2 marks)
- (iii) symptoms; (4 marks)
- (iv) control measures. (6 marks)