

PART TWO

SAMPLE PAPERS WITH ANSWERS

Theory Questions

Sample Paper 1

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. Agriculture can be defined as an art and science of keeping livestock and growing crops. Give reasons why it can be regarded as an art. (2 marks).
2. State how agriculture as an occupation provides employment. (3 marks).
3. What is:
 - (a) Subsistence farming? (1 mark).
 - (b) Monoculture? (1 mark).
4. Name the chemical used to:
 - (a) control weeds
 - (b) kill ticks
 - (c) control leaf rust. (3 marks).
5. State four disadvantages of intercropping. (2 marks).
6. What is the optimal temperature for plants? (2 marks).
7. What do you understand by the term "photosynthesis"? (2 marks).
8. Name three hand-tools mainly used during initial seedbed preparation. (3 marks).
9. (a) What hand-tool would you need to finish off the handle of a fork *jembe*? (1 mark).
- (b) What equipment would a farmer use to administer solid drugs to an animal for treatment of internal parasites? (1 mark).
10. What are the uses of the following tools and equipment?
 - (a) Ball pein hammer. (1 mark).
 - (b) Marking gauge. (1 mark).
 - (c) Lactometer (1 mark).
11. List four safety precautions which must be taken when working with farm tools. (2 marks).
12. (a) How is friction reduced in moving parts of hand-tools? (1 mark).
- (b) Name three practices necessary to improve and maintain permanent pastures. (3 marks).

SECTION B (30 marks)

13. Why does the Kenya Government put a lot of emphasis on ranching? (2 marks).
14. State four advantages of mixed farming. (2 marks).
15. Define the term "Range management". (2 marks).
16. (a) State two main reasons why nomads move with their livestock from place to place. (2 marks).
 (b) State the problems associated with shifting cultivation. (2 marks).
17. (a) How does temperature affect the growth and distribution of livestock in Kenya. (2 marks).
 (b) What are the characteristics of a high potential area? (2 marks).
18. (a) What is the difference between rill and gully erosion? (2 marks).
 (b) State the major effects of soil erosion. (2 marks).
19. Give the objectives of crop breeding at research stations. (3 marks).
20. State the advantages of using farm tools. (3 marks).
21. Give one major pest of each of the following crops:
 (a) Wheat
 (b) Pawpaw
 (c) Mango
 (d) Coconut (2 marks).
22. Below is a list of some crop pests. Complete the table by stating the crop attacked and cultural control measures. (4 marks).

<i>Pest</i>	<i>Crop</i>	<i>Cultural control</i>
Antestia		
Stainer bugs		
Stalk-borer		
Rhinoceros beetle		

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) Define the term "pasture". (4 marks).
 (b) Outline how you would establish and maintain a pasture in a mixed farm. (16 marks).
24. Describe the production of cotton under the following sub-headings:
 (a) Ecological requirements.
 (b) Planting.
 (c) Disease control.
 (d) Marketing. (20 marks).
25. Good farm management is an important factor in increasing the level of animal and crop production. What are the major management practices that a farmer should carry out in order to increase the level of production? (20 marks).

Sample Paper 2**332/1 AGRICULTURE**

Time 2½ Hrs.

SECTION A (30 marks)*Answer all questions in sections A and B.*

1. What are the benefits of rotational grazing to a livestock farmer? (2½marks).
2. State the signs of ill-health in livestock. (4 marks).
3. Outline three differences between ruminants and non-ruminants. (3 marks).
4. What is the use of a cattle dip (as a structure) in the farm? (1 mark).
5. Name any five types of fences. (2½ marks).
6. What is a vaccine? (1 mark).
7. (a) What is a notifiable disease? (1 mark).
(b) Give two examples of notifiable diseases. (1 mark).
8. (a) What is a forage crop? (1 mark).
(b) Name two main categories of forage crops. (1 mark).
(c) What is the purpose of inoculating legume seeds before planting in the establishment of leys? (2 marks).
9. Give the use(s) of each of the following farm tools and equipment.
(a) Rake (1 mark).
(b) Manure fork (1 mark).
(c) Strip cup (1 mark).
(d) Planting line (1 mark).
10. Name an important by-product of wheat milling. (1 mark).
11. Name three control measures against bud-disease of pyrethrum. (3 marks).
12. Name two symptoms of greening disease in citrus fruits. (2 marks).

SECTION B (30 marks)

13. Give two main functions of the crop in the digestive system of poultry. (2 marks).
14. (a) What is immunity in animal health? (1 mark).
(b) Name two types of immunities. (1 mark).
15. Name:
(a) three ways of conserving forage crops. (1½marks).
(b) the four stomach compartments of a ruminant and mention one function of each. (4 marks).
16. List two sources of proteins to pigs. (2 marks).
17. A crush is constructed in a livestock farm to facilitate proper animal handling for various husbandry practices. State any four of those practices carried out in a crush. (4 marks).
18. (a) What is the intermediate host of *Taenia solium*? (½ mark).
(b) What is a three host tick? (1 mark)
19. (a) What is a fodder crop? (2 marks).

- (b) Give four examples of fodder crops. (2 marks).
20. State three ways in which established pastures can be utilised economically. (3 marks).
21. What is cropping in fish farming? (2 marks).
22. (a) What is production? (2 marks).
- (b) State four factors of production. (2 marks).

SECTION C (40 marks)

Answer any two questions from this section.

23. Outline the procedure followed when spraying farm animals, using a stirrup (bucket) sprayer, to ensure complete wetting and hence effective use of acaricides. (20 marks).
24. Describe the production of oranges from propagation upto and including the marketing of produce. (20 marks).
25. (a) What is the difference between dead furrow and back furrow in tillage operations. (2 marks).
- (b) How can the following conditions be adjusted in a mouldboard plough for efficient operations?
- (i) Depth
- (ii) Pitch
- (iii) Front furrow width (6 marks).
- (c) Name the principle units of a Combine Harvester. (6 marks).
- (d) Give the three major parts in a Combine harvester which require adjustment before use in the farm. (6 marks).

Sample Paper 3

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. What is
- (a) the importance of conserving forage crops? (1 mark).
- (b) mixed pasture? (1 mark).
2. What
- (a) is the importance of legume seed inoculation? (2 marks).
- (b) are the failures in legume seed inoculation? (2 marks).
3. State three ways of determining the animals' requirement in ration formulation? (3 marks).
4. (a) What do you understand by the term "pre-disposing factors" of a disease? (1 mark).

- (b) State four examples of pre-disposing factors of a disease. (2 marks).
5. What is the name given to the time taken by a disease causing organism from infection to the time the disease symptoms are seen? (1 mark).
6. Foot trimming is a management practice done in sheep production. What disease is controlled by this practice? (1 mark).
7. State two main categories of livestock feedstuff. (2 marks).
8. Name two tools used when pruning crops. (2 marks).
9. Give two commercial uses of each of the following crops:
 (a) Wheat.
 (b) Barley. (2 marks).
10. (a) Name two materials used in propagating pineapples. (2 marks).
 (b) Name two commercial products obtained from the mango fruits after processing. (1 mark).
11. (a) Name three activities undertaken in the processing of sisal leaves. (1½ marks).
 (b) What is the basic ingredient contained in ripe tobacco, and for which the crop is cultivated? (½ mark).
12. (a) What three control measures would you take against ratoon stunting disease of sugarcane? (3 marks).
 (b) Give two control measures of sugarcane mosaic disease. (2 marks).

SECTION B (30 marks)

13. A farm two student took 40 equal paces around a rectangular plot of land. He found that the longer side was 12 paces. If each pace was 0.5m, what was the area of the plot of land? (4 marks).
14. (a) Organisms like ticks, fleas, tsetse-flies help in carrying disease-causing organisms from one animal to the other. What are such organisms called? (1 mark).
 (b) Name three types of silos for making silage. (3 marks).
15. (a) Outline the conditions which can lead to losses during hay-making. (4 marks).
 (b) State the processes involved during the handling of hay. (3 marks).
16. What is the effect of low pH in silage making? (1 mark).
17. Name two dairy breeds of goats. (1 mark).
18. Name two breeding diseases of livestock. (1 mark).
19. What factors determine the quantity of silage eaten by a dairy cow in a given time period? (4 marks).
20. Name three factors which must be considered when sorting out cotton fibres into grade A. (3 marks).
21. How would a wheat farmer control rust on his farm? (3 marks).
22. Name two uses of molasses after sugarcane processing. (2 marks).

SECTION C (40 marks)

Answer any two questions from this section.

23. Briefly describe ten maintenance points of farm tools and equipment. (20 marks).

24. (a) A farmer wanted to prepare a balanced ration for growing chicken, containing 16% D.C.P. (digestible crude protein). He was advised to use wheat and sunflower. Wheat contains 10% D.C.P. while sunflower contains 34% D.C.P. Calculate, using Pearson's square method, the amount of each feed the farmer needed in order to prepare 100kg. Show your calculations clearly. (10 marks).
- (b) Name and explain, five factors which would determine the quality of hay. (10 marks).
25. With the aid of a well labelled diagram, describe the formation of an egg in a hen. (20 marks).

Sample Paper 4

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. What do you understand by the following terms?
 - (a) Total digestible nutrients (T.D.N.).
 - (b) Starch equivalent (S.E.).
 - (c) Crude protein (C.P.) (3 marks).
2. State two reasons for feed evaluation in livestock nutrition. (2 marks).
3. List five factors that affect digestibility in livestock. (2½ marks).
4. State three qualities of a good stockman. (3 marks).
5. What is a livestock unit? (2 marks).
6. State six components of feed stuff in animal nutrition. (3 marks).
7. What are leys? (½ mark).
8. For each of the crops given below, name one major pest and its control measure.
 - (a) Cotton
 - (b) Coffee (2 marks).
9. Name two main by-products of sugarcane processing. (2 marks).
10. Give any four advantages of proper stocking rate in pasture management. (2 marks).
11. State three advantages of single-stem pruning over multiple stem pruning in coffee. (3 marks).
12. (a) What is docking in sheep management? (2 marks).
- (b) Give reasons why docking is carried out in lambs. (3 marks).

SECTION B (30 marks)

13. Differentiate between the following terms:
- (a) Roughages and Concentrates. (2 marks).
 - (b) Maintenance and production ration. (2 marks).
14. (a) Name four breeds of beef cattle. (2 marks).
- (b) State four characteristics of beef cattle. (2 marks).
15. (a) Name a breed of dairy cattle with the following characteristics: Dished forehead, yellow-brown colour, milk production fairly high and butterfat content is 5-6%: (1 mark).
- (b) Name a breed of sheep kept for mutton production with a lambing percentage of above 125 whose fleece is inferior due to black fibres. (1 mark).
16. State any four characteristics which have to be considered in selecting a good boar for breeding. (2 marks).
17. State two methods of establishing pastures. (2 marks).
18. Name three types of rotational grazing. (3 marks).
19. Why does coffee berry disease give more problems to farmers than leaf rust in coffee management? (4 marks).
20. What are the advantages of pruning in coffee management? (5 marks).
21. How would you differentiate hay from silage? (2 marks).
22. What is the reason for keeping the following breeds of sheep?
- (a) Merino (1 mark)
 - (b) Corriedale. (1 mark).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) What is a weed? (2marks).
- (b) How are weeds harmful or disadvantageous on farms? (8 marks).
- (c) What factors contribute to the competitive ability of weeds over cultivated crops? (6 marks)
- (d) Name four cultural methods of weed control. (4 marks).
24. Explain the management of sheep from selection of breeding stock to lambing time. (20 marks).
- 25 (a) List four financial documents. (4 marks).
- (b) State eight marketing functions. (8 marks).
- (c) Differentiate between the following terms:
- (i) Perfect and imperfect markets. (4 marks).
 - (ii) Monopoly and monopsony. (4 marks).

Sample Paper 5

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. (a) Name the gas which ruminants get rid of through the processes of belching. (½ mark).
(b) What happens to the ammonia gas which is a by-product of fermentation in the rumen of animals? (1 mark).
2. (a) What is the name given to the process where rough food materials in a ruminant are regurgitated for further mastication in the mouth before being swallowed again? (½ mark).
(b) State two effects of roughages in cattle feeding. (2 marks).
3. (a) What is the cause of milk fever in cattle? (1 mark).
(b) How can milk fever be
(i) treated (1 mark)
(ii) prevented? (1 mark)
4. What is the cause of grass staggers in dairy cattle? (1 mark).
5. (a) State the cause of bloat in livestock. (1 mark).
(b) How does bloat affect livestock? (2 marks).
(c) How can bloat be prevented? (1 mark).
6. Name four succulent feeds. (4 marks).
7. State two main characteristics of root crops used as livestock feeds. (2 marks).
8. (a) What is the term used to describe grain-producing crops? (1 mark).
(b) Name four grain crops of economic importance in Kenya. (2 marks).
9. Name two control measures against weevils in beans. (2 marks).
10. Define the following terms as they refer to sheep management?
(a) Tugging. (1 mark).
(b) Gestation. (1 mark).
(c) Weaning. (1 mark).
11. Name four signs of approaching lambing in ewes. (2 marks).
12. Give two reasons why it is important to take ewes to separate lambing paddocks or pans when they are approaching lambing. (2 marks).

SECTION B (30 marks)

13. State four factors affecting the nutritive value of root crops as livestock feeds. (4 marks).
14. Why is it not advisable to feed livestock on irish potato leaves and green tubers? (1 mark).
15. Explain how each of the following livestock feeds can be prepared before giving them to the animals.

- (a) Meat meal (2 marks).
(b) Blood meal. (2 marks).
16. State the functions of antibiotics as feed additives in livestock. (1 mark).
17. What is the use of the hormone stilboestrol as a feed additive in beef animals? (2 marks).
18. State four factors which determine the food quality in livestock production. (4 marks).
19. Name any four factors which must be considered when selecting a forage crop species to be established in a given area. (4 marks).
20. What is the importance of legumes in mixed pastures? (4 marks).
21. Name four important considerations taken when designing a pig house. (2 marks).
22. Give four reasons for castrating male lambs in sheep management. (4 marks).

SECTION C (40 marks)

Answer any two questions from this section.

23. Explain how you would establish tea seedlings from the cutting stage upto and including the transplanting stage. (20 marks).
24. Write short notes on the following:
(a) Stall-feeding of dairy cattle. (7 marks)
(b) Artificial Insemination as a method of improving cattle. (7 marks).
(c) Culling of layers in a flock of poultry. (6 marks).
25. (a) State four qualities of a good farm manager. (4 marks).
(b) What is a production function in agricultural economics? Give examples. (4 marks).
(c) Name three types of production functions. (3 marks).
(d) What is marginal product? (1 mark).

Sample Paper 6

332/1 AGRICULTURE

Time 2½ Hrs

SECTION A (30 marks)

Answer all questions in sections A and B.

1. Define the following terms:
(a) Stocking rate (1 mark).
(b) Carrying capacity. (1 mark).
2. State three disadvantages of mixed pastures. (1½ marks).
3. (a) What is topping in forage crops? (2 mark).
(b) State the reasons why topping is necessary in forage crops. (2 marks).

4. Name three grasses and three legumes. (3 marks).
5. State three requirements for successful reseedling in pasture production. (1½ marks).
6. State two factors that determine the amount of fertiliser to be used as a top dress in forage crops. (2 marks).
7. What is a silo? (2 marks).
8. Name the most essential feature of a good silo. (1 mark).
9. What types of records should be kept by a progressive sheep farmer? (4 marks).
10. Give two reasons why the creep area is provided in the farrowing house in pig management? (2 marks).
11. State the main problems encountered in silage making. (2 marks).
12. State the factors that affect the quality of silage. (5 marks).

SECTION B (30 marks)

13. What is deferred grazing? (2 marks).
14. (a) State four advantages of zero grazing. (4 marks).
- (b) Give two limitations of zero grazing. (2 marks).
15. What is serum in animal health? (1 mark).
16. Pregnancy toxæmia is a nutritional disorder in livestock often noticed in pregnant animals. What does this condition result from? (1 mark).
17. (a) Give the causal organism of Heartwater disease. (1 mark).
- (b) State the main characteristic symptoms of Heartwater disease in cattle. (4 marks).
18. Why is it necessary to control livestock disease? (4 marks).
19. Name four important aspects that must be observed during rearing of piglets. (4 marks).
20. Name two reasons that may necessitate the culling of ewes in a flock of sheep. (4 marks).
21. What factors must be considered when deciding where to site a bee-hive on the farm? (2 marks).
22. What is brooding in poultry? (1 mark).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) Why are goats suited to most parts of Kenya? (5 marks).
- (b) Describe the various management practices that a goat farmer should carry out. (15 marks).
24. Write short notes on each of the following:
 - (a) Seed-dressing. (4 marks).
 - (b) Timely planting of crops. (6 marks).
 - (c) Proper spacing. (6 marks).
 - (d) Fertiliser application. (4 marks).
25. Write short notes on the following diseases.
 - (a) Foot and Mouth Disease. (5 marks).
 - (b) Rinderpest. (5 marks).

- (c) Pneumonia. (5 marks).
(d) Trypanosomiasis. (5 marks).

Sample Paper 7

322/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. (a) When judging hay to determine the feeding value, certain aspects are considered. List two of these aspects. (1 mark).
(b) List the points considered when judging silage to determine its quality. (2 marks).
2. What is the name given to each of the following: (2 marks).
 - (a) A female mature rabbit.
 - (b) A young female sheep.
 - (c) A castrated goat.
 - (d) Act of giving birth by a sow. (2 marks).
3. Give two examples of each the following breeds of poultry. (2 marks).
 - (a) Light breeds. (2 marks).
 - (b) Heavy breeds. (2 marks).
4. State four characteristics of Boran cattle. (4 marks).
5. Give two reasons for bee-keeping. (1 mark).
6. Give the stages of the life cycle of a tick. (2 marks).
7. State any four symptoms of East Coast Fever in animals. (2 marks).
8. (a) What is primary seedbed preparation? (2 marks).
(b) Name three advantages of mechanising farm operations. (3 marks).
9. For each of the following crops, give the part that is best used in propagation. (2 marks).
 - (a) Onions
 - (b) Banana
 - (c) Pyrethrum
 - (d) Irish potato. (2 marks).
10. Give three symptoms of phosphorus deficiency noticeable on growing plants. (2 marks).
11. (a) What is the name given to the process during which atmospheric nitrogen is converted into nitrates? (1 mark).
(b) Give three ways in which the process in (a) above takes place. (1½ marks).
12. What is the use of caustic potash stick in livestock management? (1½ marks).

SECTION B (30 marks)

13. (a) Name the cause of Anaplasmosis disease. (1 mark).
 (b) Give three symptoms of Anaplasmosis disease. (3 marks).
14. Name two methods of controlling coccidiosis in poultry. (2 marks).
15. State three precautionary measures taken in the storage of fertilisers. (3 marks).
16. State two characteristics of bacterial diseases in livestock. (2 marks).
17. What is the difference between infectious and contagious diseases in livestock? (2 marks).
18. State any three functions of vitamins in animal nutrition. (3 marks).
19. What factors must be considered when planning a crop rotation system? (5 marks).
20. Give two main reasons for collecting soil samples for testing. (2 marks).
21. Explain the phrase "hardening off" as it refers to preparation of seedlings before transplanting. (3 marks).
22. List the different methods of vegetative propagation. (4 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) What eight precautionary measures would you take when collecting soil samples from a farm for testing? (8 marks).
 (b) Why is good soil structure desirable for growing crops? (6 marks).
 (c) State the factors one must take into account when preparing a seedbed for vegetable growing. (6 marks).
24. Describe the establishment of cabbage seedlings under the following sub-headings:
 (a) Establishment of the nursery. (7 marks).
 (b) Management of seedlings in the nursery. (6 marks).
 (c) Transplanting of seedlings. (7 marks).
25. (a) State the importance of fences in the farm. (5 marks).
 (b) Describe the steps followed in fencing. (5 marks).
 (c) State the maintenance practices carried out on fences. (2 marks).
 (d) State the uses of the following tools/equipment used in fencing:
 (i) Crow bar
 (ii) Pliers
 (iii) Chisel
 (iv) Auger bit. (8 marks).

Sample Paper 8**322/1 AGRICULTURE**

Time 2½ Hrs.

SECTION A (30 marks)*Answer all questions in sections A and B.*

1. (a) State three disadvantages of using live fences in the farm. (3 marks).
(b) What is the cause of contagious abortions (brucellosis) in cattle? (1 mark).
2. (a) Give two symptoms of blackquarter in cattle. (1 mark).
(b) Give reason why an animal which has died from Anthrax disease should not be opened up but buried. (1 mark).
3. (a) State four factors which determine the type of structural material to use in building farm structures. (2 marks).
(b) What is the difference between concrete and mortar in farm constructions. (1 mark).
4. State three reasons why wood is treated before being used in the farm. (3 marks).
5. Give two methods of estimating the quantities of cement, sand and aggregate needed to make concrete. (1 mark).
6. State two uses of concrete in the farm. (1 mark).
7. In a concrete mixture of 1:3:5, twenty one cubic metres of sand were recommended to be used in putting up a foundation of a building. Find the volume of the other two ingredients. (3 marks).
8. (a) Name the tool or implement used to relieve bloat in ruminants. (1 mark).
(b) How is spirit level useful to farmers when constructing farm structures? (1 mark).
(c) What is the use of a dibber as a garden equipment? (1 mark).
9. What commercial product is obtained from pawpaw? (2 marks).
10. Name four uses of sisal fibre in the farm. (2 marks).
11. (a) Name four areas in Kenya where cotton is grown. (2 marks).
(b) What two control measures are effective against bacterial blight in cotton? (2 marks).
12. Name two effective control measures against Coffee Berry Disease in coffee production. (2 marks).

SECTION B (30 marks)

13. (a) Name any two materials commonly used as wood preservatives. (2 marks).
(b) State three uses of Mortar in buildings. (3 marks).
14. Explain the following terms:
(a) Quarantine
(b) Engorged tick
(c) Inbreeding
(d) Morant system. (4 marks).

15. Name measures which you would advise a farmer to take to prevent any attack by Newcastle disease in poultry? (3 marks).
16. Define the term "mortality" in livestock. (2 marks).
17. Name three types of Natural Immunities. (3 marks).
18. is the science of maintaining animals in good health and preventing possible out-break of a disease. (1 mark).
19. State four reasons for staking in tomatoes. (4 marks).
20. What factors affect the quality of silage? (4 marks).
21. List four reasons why maintenance practices are carried out on farm tools. (2 marks).
22. Name the hand-tools required to construct a simple crush. (2 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. Discuss the following diseases: Foot and Mouth Disease, Mastitis, Trypanosomiasis and Foot Rot under the following sub-headings:
 - (a) Animal attacked (one each)
 - (b) Causes
 - (c) Control measures (one each). (20 marks).
24. Describe how you would prepare sugarcane seedbed and plant the "seed cane" in the field. (20 marks).
25. On 2/6/91 Mr. Onyancha's farm started the year with shs. 600 in the bank and shs. 400 in the cash box. The farm was owed shs. 4,000 for milk sold to K.C.C. and shs. 600 for maize sold to merchants. The farm owed shs. 2,000 for D.A.P. fertilisers and Unga Ltd. shs. 600 for feeds. The opening valuation of the farm as at 2nd June is as follows:

	<i>Kshs.</i>
Cattle	25,000
Maize in the granary	9,000
Harvested Potatoes	5,000
Beans in sacks	3,000
Heifer calves	15,000
Goats	5,000
Sheep	7,000
Buildings	125,000
Land	160,000
Tractors	80,000
Milking machine	10,000
Dairy meal	600
Supplies for the office	1,400

- (a) Draw up a balance sheet. (14 marks).
- (b) Is the farm solvent or insolvent? (2 marks).
- (c) If Mr. Onyancha applied for a loan of shs 300,000 to expand and develop his farm, do you think he would stand a good chance of getting the loan. (2 marks).
- (d) List any two points you would take into account while considering him for a loan. (2 marks).

Sample Paper 9**322/1 AGRICULTURE**

Time 2½ Hrs.

SECTION A (30 marks)*Answer all questions in sections A and B.*

1. (a) What is agroforestry? (1 mark).
(b) State four importance of agroforestry. (2 marks).
2. Name three methods of treating tree seeds before planting. (3 marks).
3. What is soil erosion? (1 mark).
4. State three factors which influence the extent of soil erosion. (3 marks).
5. What is cover cropping? (2 marks).
6. State three importance of mulching to crops. (3 marks).
7. Why is gully erosion considered to be particularly more serious than other types of erosion? (2 marks).
8. (a) Define the term soil? (1 mark).
(b) Name one term used to describe the process by which soil is formed. (1 mark).
(c) Define the term "soil profile" (1 mark).
9. List three symptoms of nitrogen deficiency in growing plants. (1½ marks).
10. (a) What role do micro-organisms play in the soil? (1 mark).
(b) Name two important physical characteristics of soil which enable them to support plant life. (2 marks).
11. Give three types of soil based on textural characteristics. (1½ marks).
12. State four factors or agencies which influence soil formation process. (4 marks).

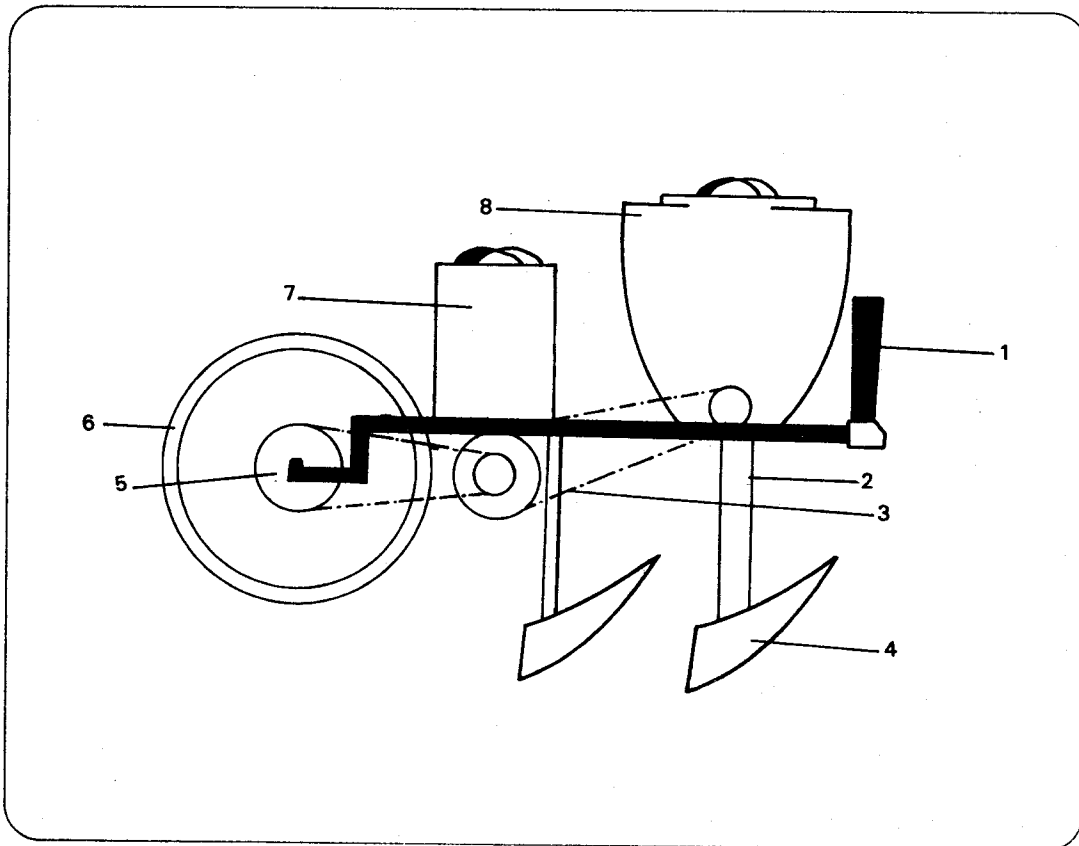
SECTION B (30 marks)

13. What is the difference between cut-off-drains and grassed waterways. (2 marks).
14. List two methods of conserving soil and water on a hilly area. (2 marks).
15. Explain how splash or raindrop erosion takes place. (2 marks).
16. What is gully erosion? (1 mark).
17. (a) What is land reclamation? (1 mark).
(b) State the importance of land reclamation? (3 marks).
18. List four methods of land reclamation. (4 marks).
19. State five reasons why crop rotation is an important practice in farming. (4 marks).
20. (a) Name four advantages of liming as a measure of soil improvement. (4 marks).
(b) Name six major elements, derived from the soil, which are taken in large amounts by plants. (3 marks).
21. State four reasons why farmers are encouraged to add organic matter to the soil. (2 marks).
22. Which three ways may be used to add organic matter in the soil? (3 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) Define the term soil fertility? (4 marks).
 (b) In what ways may a fertile soil lose its fertility? (8 marks).
 (c) How can farmers maintain and improve the fertility of soil on their farms? (8 marks).
24. (a) Give the name of the equipment shown in the diagram below. (1 mark).
 (b) Name the parts numbered 1-8. (16 marks).
 (c) What are the major maintenance practices carried out on the equipment above. (3 marks).



25. The table below gives the figures of population growth (in millions) and food grain production (in thousand tons) per year. Using the same axes represent these figures graphically. (16 marks).

<i>Years</i>	<i>Food Production (000) per ton</i>	<i>Population (Million)</i>
1875	5.50	18
1880	6.25	19
1885	4.25	20
1890	6.00	21
1895	4.50	26
1900	6.00	30
1905	8.75	34
1910	8.75	40
1915	8.00	43
1920	11.00	54
1925	10.20	58
1930	12.50	70
1935	12.00	100
1940	13.20	135
1945	12.00	142
1950	13.75	163
1955	12.20	180
1960	13.00	190
1965	12.50	197
1970	15.00	208
1975	14.20	210
1980	14.50	220
1985	14.20	226
1990	15.00	228
1995	14.50	232
2000	15.00	238

- (i) What was the average food grains produced per person in 1915. Give your answer in gms. (4 marks).

Sample Paper 10

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. What:
 - (a) are bunds in soil and water conservation? (2 marks).
 - (b) is the function of the above mentioned structure? (1 mark).
2. Give four characteristics of traditional agriculture. (2 marks).
3. State four roles played by agriculture in national economic development. (2 marks).
4. Define the following terms: (3 marks).
 - (a) Fallowing
 - (b) Ecology
 - (c) Fingerling.
5. What are the major characteristics of plantation farming? (2 marks).
6. (a) How does temperature of a place affect the quality of pyrethrum? (1 mark).
- (b) State four roles played by vegetation cover in soil and water conservation. (2 marks).
7. Give two reasons why grass ley is recommended in a crop rotation programme. (1 mark).
8. What are the benefits of using organic mulches in crop production? (2 marks).
9. Name three ways in which soil is important to growing plants. (3 marks).
10. (a) What is soil capping? (1 mark).
- (b) In what two ways can the problem of soil capping be overcome? (2 marks).
11. What determines the spacing at which crops are planted? (2 marks).
12. What are the disadvantages of broadcasting as a method of planting crops? (4 marks).

SECTION B (30 marks)

13. State two benefits of early planting in maize. (2 marks).
14. (a) State four disadvantages of burning the bush during land preparation. (2 marks).
- (b) State four effects of temperature in crop production. (2 marks).
15. What is Pastoralism? (1 mark).
16. List four farming practices that encourage soil erosion in Kenya. (2 marks).
17. (a) What is the importance of draining waterlogged soil? (1 mark).
- (b) Explain how sheet erosion takes place in the farm. (2 marks).
- (c) State two ways in which overstocking influences soil erosion. (2 marks).
18. Differentiate between the following terms:
 - (a) Diversification and specialisation. (1 mark).
 - (b) Subsistence and Commercial farming. (1 mark).
 - (c) Extensive and intensive farming. (1 mark).

19. State three disadvantages of using manures as compared to the use of inorganic fertilisers. (3 marks).
20. What factors must be considered when selecting planting materials? (4 marks).
21. What biological agents can either hasten or slow down the process of soil formation? (3 marks).
22. What are the functions of each of the following parts of a mouldboard plough? (3 marks).
 - (a) Landside
 - (b) Mouldboard
 - (c) Coulter.

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) What is a knapsack sprayer? (2 marks).
(b) Explain how a knapsack sprayer is operated. (8 marks).
(c) What maintenance practices should be carried out on this type of sprayer to ensure its proper functioning? (10 marks).
24. (a) How would a farmer identify an animal suffering from worm infestation? (9 marks).
(b) What measures could be taken to control internal parasites? (8 marks).
(c) Give three examples of internal parasites. (3 marks).
25. (a) Briefly outline problems that have hindered agricultural development in Kenya. (10 marks).
(b) Suggest ways in which these problems can be alleviated. (10 marks).

Sample Paper 11

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in Section A and B.

1. Give two characteristics that make indigenous cattle better suited to marginal areas than exotic cattle breeds. (2 marks).
2. (a) What is Photoperiodism? (1 mark).
(b) State four characteristics of good agricultural land. (2 mark).
3. Define the following terms:
 - (a) Livestock. (1 mark).
 - (b) Pedology. (1 mark).
 - (c) Entomology. (1 mark).
4. State two limitations of mixed farming. (2 marks).

5. (a) What are gabions? (1 mark).
(b) List materials required in constructing a gabion. (2 marks).
6. How do dams and reservoirs help in soil and water conservation? (2 marks).
7. What is the difference between climate and weather? (1 mark).
8. (a) Define the term propagation as it relates to crops. (1 mark).
(b) Give one example of a crop propagated by each of the following methods: (1½ marks).
(i) Use of seeds.
(ii) Bud-grafting.
(iii) Stem Cuttings.
9. What is the term used to refer to the application of fertilisers to already growing plants. (½ mark).
10. State the term used to describe aggregation of soil particles. (1 mark).
11. Give two reasons why it is important to plant crops using the correct spacing. (4 marks).
12. (a) What factors affect seed dormancy? (3 marks).
(b) Name three common-farming practices which are employed or carried out to improve soil structure. (3 marks).

SECTION B (30 marks)

13. State two disadvantages of cover cropping. (2 marks).
14. Explain the meaning of the following terms:
(a) Long day plants. (1 mark).
(b) Short day plants. (1 mark).
(c) Neutral day plants. (1 mark).
15. Explain the significance of "green house effect" in agricultural production. (2 marks).
16. (a) What are the advantages of inter-cropping. (2 marks).
(b) What is mixed cropping? (1 mark).
(c) State the importance of bench-terrace. (1 mark).
17. (a) What is the difference between graded terrace and level terrace. (2 marks).
(b) List four most important tools/equipment used when terracing land. (2 marks).
18. Give reasons why bench terraces are not constructed in an area where the soils are too shallow. (2 marks).
19. Name four functions of water in plants. (4 marks).
20. (a) What are the constituents of a fertile soil? (2 marks).
(b) Give two types of nitrogenous fertilisers commonly used for top-dressing crops. (3 marks).
21. What three factors or conditions would necessitate the use of an ox-plough rather than a tractor-drawn plough? (3 marks).
22. Some bacteria are useful while others are harmful. Name four functions of the useful bacteria in both crop and livestock production. (2 marks).

SECTION C (40 marks)

23. Describe the production of cotton under the following sub-headings.
- (a) Propagation. (2 marks).
 - (b) Land/seed-bed preparation. (4 marks).
 - (c) Pest Control. (6 marks).
 - (d) Harvesting and grading. (8 marks).
24. (a) Distinguish between the following terms:
- (i) Macro-economics and micro-economics. (4 marks).
 - (ii) GDP and per capita income. (4 marks).
- (b) Explain how the principle of demand and supply operates in the agricultural market. (8 marks).
- (c) How is Equilibrium Price established. (4 marks).
25. (a) Draw a well labelled diagram of a disc plough. (7 marks).
- (b) State the functions of any four parts. (8 marks).
- (c) State five maintenance practices carried out on the implement. (5 marks).

Sample Paper 12**332/1 AGRICULTURE**

Time 2½ Hrs.

SECTION A (30 marks)*Answer all questions in sections A and B.*

1. (a) What is crop rotation? (1 mark).
- (b) What is the importance of crop rotation? (2 marks).
2. List four problems which hinder afforestation in Kenya. (2 marks).
3. (a) State the programmes carried out to encourage afforestation. (2 marks).
- (b) State the role of forests to our economy and environment. (2 marks).
4. Name an instrument used for measuring the amount of rainfall. (1 mark).
5. List the climatic factors that affect growth and distribution of crops and livestock. (2 marks).
6. What is arable farming? (1 mark).
7. State the common features of ranching as a farming system in Kenya. (3 marks).
8. (a) At what stage of growth are coconut seedlings transplanted to the field? (1 mark).
- (b) Name four commercial products which are manufactured from wheat grains. (2 marks).
9. (a) Name two breeds of rabbits reared in Kenya. (1 mark).
- (b) Explain the following terms as they relate to livestock management.
 - (i) Farrowing (1 mark).
 - (ii) Kindling. (1 mark).

10. State two measures which coffee farmers should take to control leaf rust in coffee. (2 marks).
11. Name four methods used to control weeds in pastures. (2 marks).
12. (a) Give three types of rations given to pigs at different stages of their growth. (3 marks).
- (b) What is tupping as relates to breeding in sheep? (1 mark).

SECTION B (30 marks)

13. State reasons for keeping rainfall records. (2 marks).
14. (a) State four advantages of plantation farming. (2 marks).
- (b) State the disadvantages of plantation farming. (2 marks).
15. Give any two farming systems practiced in Kenya by small-scale farmers. (2 marks).
16. Give two farming systems practised in Kenya on large-scale. (2 marks).
17. What three aspects of rainfall would you consider before introducing a crop in a certain area? (3 marks).
18. Mention any four factors which may influence soil erosion in a given area. (4 marks).
19. Name the important features that must be provided when constructing a fish-pond. (4 marks).
20. What:
- (a) is swarming in bees? (2 marks).
- (b) causes swarming in bees? (3 marks).
21. Name two important diseases of goats and their control. (4 marks).

SECTION C (40 marks)

Answer any two questions in this section.

22. Describe the production of pyrethrum under the following sub-headings:
- (a) Propagation (4 marks).
- (b) Land preparation (4 marks).
- (c) Planting (4 marks).
- (d) Harvesting and drying. (8 marks).
23. (a) What is a "parasite". (2 marks).
- (b) In what ways are ticks harmful to livestock? (6 marks).
- (c) What are the general control measures taken against livestock diseases? (12 marks).
24. (a) State the principle of substitution. (2 marks).
- (b) Distinguish between the following terms:
Constant rate of substitution and varying rate of substitution. (4 marks).
- (c) A farmer could combine sow and weaner meal and home-made feeds to obtain 40kg. of bacon on mature pigs as shown below:

<i>Sow and weaner meal in kg.</i>	<i>Home made feed in kg.</i>	<i>Marginal rate of substitution (MRS)</i>
2	39
3	30
4	23
5	18
6	14
7	12
8	11
9	10

- (i) Fill in the blank spaces. (4 marks).
(ii) Given the price of sow and weaner meal is shs.2.00 per kg, and that of home-made feed is 80 cents per kg, calculate the least cost combination. (10 marks).

Sample Paper 13

322/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in section A and B.

- What is soil conservation? (1 mark).
- State the common features of subsistence farming or peasant farming in Kenya. (3 marks).
- List the ecological factors affecting agriculture. (2 marks).
- State three characteristics of shifting cultivation. (3 marks).
- What are transhumant pastoralists? (1 mark).
- Name eight raw materials used in agricultural industries in Kenya. (4 marks).
- What is the meaning of the term "sedentary agriculture". (2 marks).
- How much of the fertiliser labelled 20:20:0 should be applied to a plot which requires 30kg. P_2O_5 ? (2 marks).
- In what ways can the ability of a waterlogged clay soil be improved to sustain plant growth? (3 marks).
- Why would a farmer choose to use a disc rather than a mouldboard plough? (3 marks).
- Define the term "monocropping"? (2 marks).
- Give the features which characterise nitrogenous fertilisers. (4 marks).

SECTION B (30 marks)

13. State six factors considered in choosing a type of farming system to adopt. (3 marks).
14. Give four main factors that determine the rate of soil erosion. (2 marks).
15. Give four farming practices that may lead to soil loss. (4 marks).
16. State five remedies adopted to curb soil erosion. (4 marks).
17. Explain the meaning of the terms "deforestation" and "reafforestation". (1 mark).
18. How are crop products prepared before storage? (2 marks).
19. Name the factors or conditions that determine the quality of farmyard manure. (4 marks).
20. What factors determine the choice of implements used to prepare a seedbed? (4 marks).
21. Name three types of surface irrigation. (3 marks).
22. State three methods of preserving fish after harvesting. (3 marks).

SECTION C (40 marks)

Answer any two questions from this section.

23. (a) What is a seedbed? (4 marks).
(b) What factors must be considered when preparing a seedbed? (8 marks).
(c) Explain how you would prepare a seedbed from a bushy area using hand tools. (8 marks).
24. Describe fowl typhoid under the following sub-headings:
 - (a) Cause. (5 marks).
 - (b) Transmission. (5 marks).
 - (c) Symptoms. (5 marks).
 - (d) Control measures. (5 marks).
25. (a) What is the importance of disc harrows? (2 marks).
(b) State three adjustments and settings for proper operations of a disc harrow. (6 marks).
(c) Draw a well labelled diagram of a disc harrow. (8 marks).
(d) What are the major maintenance practices on a disc harrow? (4 marks).

Sample Paper 14**332/1 AGRICULTURE**

Time 2½ Hrs.

SECTION A (30 marks)*Answer all questions in sections A and B.*

1. What is the difference between primary tillage and secondary tillage operations. (2 marks).
2. Give two advantages of sprouting (chitting) in potato seeds. (2 marks).
3. State advantages of raising seedlings in seed boxes instead of nursery beds. (2 marks).
4. Name two types of indigenous East African Zebu cattle (*bos indicus*) and two exotic breeds (*bos taurus*) in Kenya. (2 marks).
5. Name four secondary tillage implements used in the farm. (4 marks).
6. What is browsing in goats? (4 marks).
7. Give four storage problems commonly faced by small scale farmers. (2 marks).
8. Define the term "Gross National Product" in agricultural economics. (2 marks).
9. Name three categories of capital as a factor of production. (2 marks).
10. What is profit maximization? (2 marks).
11. What is the importance of applying phosphatic fertiliser at planting time? (2 marks).
12. Name the factors that determine the quality of farmyard manure. (4 marks).

SECTION B (30 marks)

13. List four characteristics of a good storage structure for crops. (4 marks).
14. (a) State the disadvantages of overhead irrigation in farming. (2 marks).
- (b) Give two disadvantages of surface irrigation in farming. (2 marks).
15. State two advantages of structures made of concrete. (1 mark).
16. State four factors that determine the types of irrigation that can be used in a particular area. (2 marks).
17. Name four types of water pumps. (4 marks).
18. State the main reasons why water for human consumption must be treated before use. (2 marks).
19. List four examples of farm practices that are carried out to improve crop productivity. (4 marks).
20. Name the various services which can help farmers improve and increase their production. (3 marks).
21. (a) How would you define the term "budgeting"? (1 mark).
- (b) Name two types of budgets that can be made by farmers to assist them in their farm operations. (2 marks).
22. In what ways is a budget useful to a farm planner? (3 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) Define the term "cost" in economics. (5 marks).
 (b) Distinguish between variable and fixed costs. (4 marks).
 (c) Give four examples of each of the type of costs in (b) above. (4 marks).
 (d) Name the agents and organisation that are involved in the marketing of agricultural produce. (7 marks).
24. (a) Define parasite as it applies to livestock management. (4 marks).
 (b) Of what economic importance are parasites to livestock? (10 marks).
 (c) Give three examples of internal parasites and three examples of external parasites. (6 marks).
25. Describe the growing of bananas under the following sub-heading.
 (a) Ecological requirements (4 marks).
 (b) Cultivars (3 marks).
 (c) Land preparation and planting (4 marks).
 (d) Field management (5 marks).
 (e) Diseases and their control. (4 marks).

Sample Paper 15

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B in the spaces provided.

1. (a) What is the difference between an invoice and a delivery note? (1 mark).
 (b) State the difference between a current account and a savings account. (1 mark).
2. State four advantages of row planting in large scale farming. (2 marks).
3. (a) Give four important reasons for pre-conditioning seeds before planting. (4 marks).
 (b) State two reasons why mechanisation in small scale farming is not profitable in Kenya. (1 mark).
4. (a) What is irrigation? (2 marks).
 (b) State four factors which must be considered before embarking on irrigation projects. (2 marks).
5. (a) State two main uses of a tractor trailer. (1 mark).
 (b) Mention two maintenance practices on a tractor trailer. (2 marks).
6. How can one obtain clean milk from a dairy herd? (4 marks).
7. Why are farm accounts kept? (1 mark).
8. What is a statutory body? (2 marks).

9. Name four statutory bodies which market agricultural produce in Kenya. (2 marks).
10. Give two reasons why rough lemon is used as a rootstock in citrus production. (2 marks).
11. Name four types of co-operatives in Kenya. (2 marks).
12. What are the possible causes of infertility in cattle? (1 mark).

SECTION B (30 marks)

13. (a) Name three types of water pipes. (3 marks).
(b) Name the main parts of a partial budget. (2 marks).
14. State the uses of a spike tooth harrow. (2 marks).
15. State three reasons why a farmer should diversify his farm enterprises. (2 marks).
16. Give four conditions under which an ox-plough is ideal to be used. (2 marks).
17. List four products obtained from milk. (2 marks).
18. Define the term "elasticity of supply" (2 marks).
19. Explain the meaning of the following terms:
(a) Gross margin (4 marks)
(b) Net revenue. (2 marks).
20. (a) Define 'net farm income'. (2 marks).
(b) Give the main characteristics of fixed costs in a production process. (2 marks).
21. Name the management practices which are carried out to discourage egg-eating in a poultry unit. (4 marks).
22. What are the activities carried out by Young Farmers Clubs as a youth organisation? (3 marks).

SECTION C (40 marks)

Answer any two questions in this section

23. (a) State the law of diminishing returns and give an example of its application in a production process. (6 marks).
- (b) Use the information given in the table below to answer the questions that follow:

Fert. inputs units	Potato yeild bags	Marginal product bags
0	50	
1	62	12
2	66	4
3	68	2
4	69	1
5	69	0

The cost of fertilisers is Shs. 320 per unit and the price of potatoes is shs. 200 per bag.

- (i) At what point of fertiliser application should the farmer be advised to stop investing in potatoes? (5 marks).
- (ii) Give a reason for your answer in (i) above. (4 marks).
- (iii) At what level is net revenue highest? (5 marks).

24. (a) What are plant nutrients? (2 marks).
 (b) Name the major nutrients taken by plants in large amounts. (4 marks).
 (c) Explain the procedure followed when taking a soil sample for analysis. (10 marks).
 (d) Outline the procedure followed in legume seed inoculation. (4 marks).
25. (a) State four tests one would carry out in determining the quality of fresh eggs. (4 marks).
 (b) Draw clearly a diagram to show the structure of an egg. (8 marks).
 (c) Give the functions of any four parts of an egg. (8 marks).

Sample Paper 16

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. (a) What is price as used in agricultural economics? (1½ marks).
 (b) What is the name given to the sum total of goods and services produced by a country within a period of one year. (1 mark).
2. State two methods of treating dirty water to make it suitable for consumption. (2 marks).
3. Name three classes of water sources. (1½ marks).
4. List three problems faced by farmers when marketing their agricultural produce. (3 marks).
5. In a normal market situation what happens when
 (a) supply of a commodity exceeds its demand. (1 mark).
 (b) demand of a commodity exceeds its supply? (1 mark).
6. Name four uses of water in the farm. (4 marks).
7. Name two factors which determine the price of an agricultural commodity. (2 marks).
8. Give two objectives of rolling in land preparation. (2 marks).
9. What signs would show that a cow is approaching parturition? (2 marks).
10. Why is it necessary to dehorn calves? (2 marks).
11. (a) Name two conditions which may predispose foot rot in sheep. (2 marks).
 (b) What precautions must be observed when shearing sheep to ensure production of the highest quality wool? (2 marks).
12. State three factors which should be considered when selecting milk goats for breeding. (3 marks).

SECTION B (30 marks)

13. (a) Give the two types of grass mowers commonly used in Kenya. (2 marks).

- (b) State four maintenance practices carried out on the above mentioned farm machinery to remain in good working condition and maintain efficiency. (2 marks).
14. (a) What is drip/trickle irrigation? (1 mark).
(b) State four advantages of drip irrigation. (4 marks)
15. State four problems faced by a farmer who uses animals e.g. oxen as a source of farm power. (4 marks).
16. Differentiate between the terms "market" and "marketing". (2 marks).
17. Name two types of calf pens. (1 mark).
18. Give two disadvantages of using wood fuel or charcoal as a source of power in agricultural activities. (2 marks).
19. What signs would indicate that a gilt is on heat? (4 marks).
20. Name the three types of feeds given to pigs at different stages of their growth. (3 marks).
21. What three considerations must be taken into account when siting a rabbit hutch? (3 marks).
22. State four general precautions taken to prevent incidences of diseases and pests in rabbit management. (2 marks).

SECTION C (40 marks)

Answer any two questions in this section

23. Write short notes on the following:
- (a) Land reform. (7 marks).
(b) Research and extension services (7 marks).
(c) Credit facilities. (6 marks).
24. What management activities would a poultry farmer carry out to reduce stress in a flock of layers? (20 marks).
25. (a) Give four problems associated with water. (4 marks).
(b) What is water cycle? (4 marks).
(c) Discuss the processes in water cycle. (12 marks).

Sample Paper 17

332/1 AGRICULTURE

Time 2½ Hrs.

SECTION 4 (30 marks)

Answer all questions in section A and B.

1. (a) What would happen to the price of a commodity if its supply increases without the demand changing? (1 mark).

- (b) What would happen to the price of a commodity if the supply of the commodity decreases without the demand changing? (1 mark).
2. (a) What is tillage operation in farming? (1 mark).
(b) Name five primary tillage implements in large scale farms. (2½ marks).
3. (a) Name two types of planters. (1 mark).
(b) State the functions of seed planters. (4 marks).
4. Name the machine which crushes lumps of soil and compacts it after ploughing or harrowing. (1 mark).
5. Name three types of nozzles used in sprayers. (1½ marks).
6. State the function of the nozzle in a knapsack sprayer. (1 mark).
7. What is the function of a stuning gun? (1 mark).
8. (a) For what purposes are donkeys used by farmers? (2 marks).
(b) What two factors must be considered when harnessing donkeys for work? (4 marks).
9. Why is it not advisable to feed rabbits with Irish potato or tomato vines (tops)? (2 marks).
10. Why are camels suited to working in arid and semi-arid areas? (2 marks).
11. Name the roles played by each of the three different members of a bee colony. (3 marks).
12. Explain the terms lamb crop as it refers to sheep management. (2 marks).

SECTION B (30 marks)

13. (a) State the functions of the following parts of a mower.
(i) Wear plates (2 marks).
(ii) Swath board. (2 marks).
(b) How does a reciprocating mower receive power from the tractor? (1 mark).
14. Explain briefly why notched disc harrows are better than plain disc harrows in land preparation. (2 marks).
15. What is the use of spring time harrow in seedbed preparation? (2 marks).
16. Give the difference between a profit and loss account and a balance sheet. (2 marks).
17. State six advantages of using herbicides in weed control. (3 marks).
18. State four factors which affect the pulling power of a tractor during ploughing. (4 marks).
19. State two maintenance practices carried out on a top-bar hive. (4 marks).
20. Give the precautions which must be taken when harvesting honey. (4 marks).
21. What are the essential features of an ideal fish-pond? (2 marks).
22. Mention factors which determine the quality of honey. (2 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. Write short notes on the following:
(a) Land consolidation. (7 marks).
(b) Factors necessary for proper functioning of farmers' co-operative societies in Kenya. (7 marks).

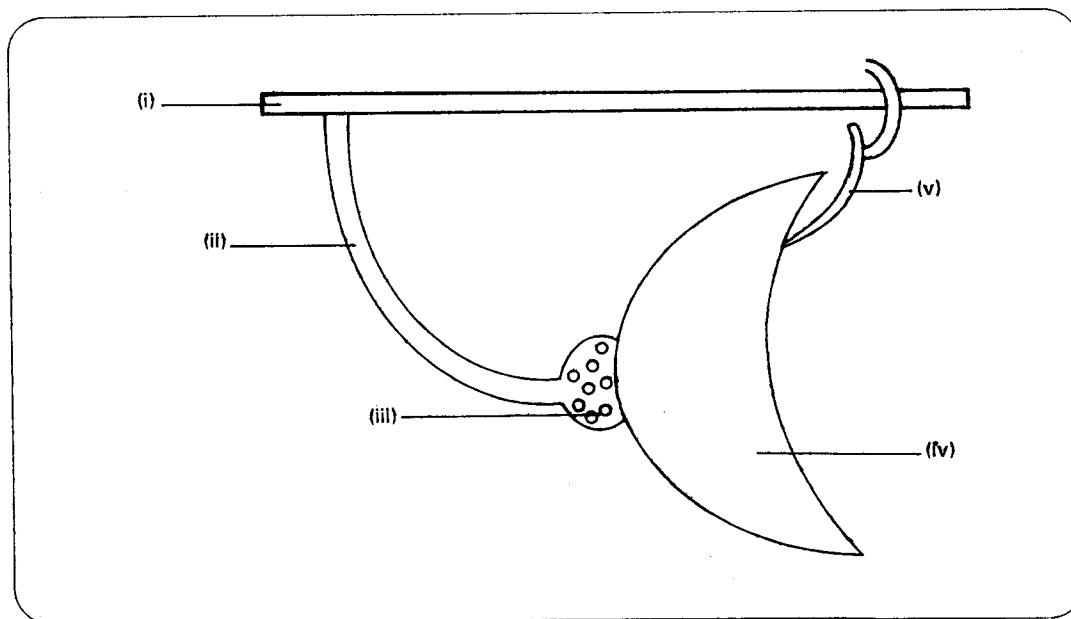
- (c) How farmers can guard against risks and uncertainties in agricultural production. (6 marks)
24. (a) Use the information provided below to calculate gross margin of maize. (9 marks).

<i>Crop</i>	<i>Maize</i>
Yield	32 bags
Price/Unit	shs. 85.00

Variable Costs Per hectare.

	<i>Kshs.</i>
Digging of the land	320.00
Purchase of maize seeds	58.00
Purchase of DAP fertilisers	180.00
Purchase of bags for maize	160.00
Casual labour wages	740.00
Miscellaneous expenses	45.00

- (b) Why should a farm plan be reviewed after a certain period of time? (8 marks).
- (c) Name two types of labour. (2 marks).
- (d) Give one unit of measuring labour output. (1 mark).
25. (a) State the uses of a chisel plough. (4 marks).
- (b) Give the name of the diagram below. (2 marks).



- (c) Name the parts labelled (i) - (v). (5 marks).
- (d) State the functions of part (v). (4 marks).
- (e) State the functions of part (iv). (2 marks).
- (f) State three conditions under which the above implement is used. (3 marks).

Sample Paper 18**332/1 AGRICULTURE**

Time 2½ Hrs.

SECTION A (30 marks)*Answer all questions in sections A and B.*

1. Name any eight sources of farm power. (4 marks).
2. State four factors that affect demand of a commodity in a free market situation. (2 marks).
3. State four operational differences between a disc plough and a mouldboard plough. (4 marks).
4. Give the name of an implement which can be used for both primary tillage and secondary tillage operations. (1 mark).
5. (a) Name the type of plough which can be used to open up land containing tree stumps, stones and tall surface vegetation. (1 mark).
(b) Give two reasons why the type of plough mention in (a) above is suitable for that purpose. (2 marks).
6. What is the name given to the point where the supply and the demand curve intersect? (1 mark).
7. Give four signs of heat observed on female rabbit. (2 marks).
8. The vaccination of sheep is meant to protect them against some diseases. Name any four of such diseases. (2 marks).
9. Name two methods which are particularly suitable for castrating young lambs. (2 marks).
10. What are the advantages of age-grouping farm animals as a management practice? (3 marks).
11. What considerations must be taken into account when planning the construction of a grain store? (4 marks).
12. State two uses of bananas. (2 marks).

SECTION B (30 marks)

13. Give a reason why a rotary mower is effective even in rough areas and areas with tall vegetation. (2 marks).
14. Why is it important to plant sweet potatoes on ridges? (3 marks).
15. (a) Give two symptoms of rice blast. (2 marks).
(b) State the control measure against the above mentioned disease. (2 marks).
16. Give the functions of the following parts of mouldboard plough:
(a) Share
(b) Frog
(c) Beam. (3 marks).
17. Name the part of a tractor which is used for the attachment of the impliment such as the trailer. (2 marks).

18. Name two control measures against the banana weevil. (2 marks).
19. Name the management practices carried out to ensure maximum harvest of fish from a fish-pond. (4 marks).
20. (a) What do you understand by the term "land tenure"? (2 marks).
(b) Name the possible shortcomings of the communal land tenure system. (4 marks).
21. What are the possible disadvantages of owner-operator system of land tenure? (2 marks).
22. In what ways is tenancy, as a tenure system, beneficial to a tenant? (2 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) Explain what you understand by the term "co-operative". (2 marks).
(b) What services do co-operatives offer to their members? (12 marks).
(c) Name and briefly describe the problems that face co-operatives in Kenya. (6 marks).
24. (a) How are the following adjustments carried out on mouldboard plough and disc plough.
Mouldboard (i) Depth (4 marks).
(ii) Pitch
Disc plough (i) Depth (4 marks).
(ii) Pitch
(b) Name the main parts of a ridge and their functions. (6 marks).
(c) State the maintenance practices carried out on the ridger to remain in good working condition. (6 marks).
25. Describe the production of coffee under the following sub-headings:
(a) Propagation (2 marks).
(b) Ecological requirements (5 marks).
(c) Land preparation (9 marks).
(d) Pest control. (4 marks).

Sample Paper 19

332/1 AGRICULTURE

Time 2½ hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. Give the difference between a cherry and parchment in coffee. (2 marks).
2. State the functions of the following parts of a tractor:
(i) Top link (1 mark).

- (ii) Check chains. (1 mark).
3. (a) What is castration in livestock? (½ mark).
 (b) State four reasons why castration is done in livestock (4 marks).
 (c) Name the four tools used in castration of livestock. (2marks).
4. Name three ways in which germs can gain access to a newly born calf. (1½ marks).
5. Name any two methods that can be used to detect mineral nutrient deficiency in crops. (2 marks).
6. How is nitrogen lost from the soil? (2 marks).
7. What is strip cropping? (1 mark).
8. State three management practices which are carried out in order to enable donkeys to work efficiently on farms. (3 marks).
9. What two main factors are considered when selecting rabbits for breeding? (2 marks).
10. State two disadvantages of propagating crops by use of seeds. (4 marks).
11. What conditions would make it necessary to sub-divide land into smaller pieces? (2 marks).
12. Name two factors which determine planting depth in crop production. (2 marks).

SECTION B (30 marks)

13. What determines the stage at which crops are harvested? (4 marks).
14. State four factors which determine the quality and amount of concrete to be used in the construction of farm structures. (4 marks).
15. State the use of P.T.O. (power take off) shaft tractor. (2 marks).
16. A school's deep litter poultry house measures 9m by 3m. If the amount of space allowed for one bird is 0.27m². Calculate the number of birds that the school can keep in the house. (2 marks).
17. List two storage pests of maize. (2 marks).
18. Give advantages of deep litter system over free range in poultry rearing. (2 marks).
19. (a) Define the term "land settlement". (2 marks).
 (b) State the main objectives of land settlement programmes which have been undertaken in Kenya. (4 marks).
20. Both households and firms are income-generating entities. Name three major ways in which such incomes may be used. (3 marks).
21. What is a factor of production? (1 mark).
22. (a) What do you understand by "scarcity of resources"? (2 marks).
 (b) Explain why sweet potatoes should not follow cassava in a rotation system. (2 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) What contributions have settlement schemes made to Kenya's agriculture? (12 marks).

- (b) Briefly describe the problems that have been encountered in the implementation of settlement schemes in Kenya. (8 marks).
24. (a) Discuss the rearing of day-old chicks upto 8 weeks of age. (8 weeks).
(b) Explain how candling of eggs is carried out. (5 marks).
(c) What points would you look for in identifying a non-laying bird? (7 marks).
25. Describe the production of maize under the following sub-headings:
(a) Land preparation (4 marks).
(b) Planting (4 marks).
(c) Pest control (8 marks).
(d) Harvesting. (4 marks).

Sample Paper 20

332/1 AGRICULTURE

Time: 2½ Hrs.

SECTION A (30 marks)

Answer all questions in sections A and B.

1. Give two major advantages of using bricks in the construction of farm buildings. (2 marks).
2. What is the major cause of anaemia in piglets? (1 mark).
3. State four factors which affect the supply of a commodity. (2 marks).
4. Differentiate between a cash book and a ledger book. (2 marks).
5. What is a journal in accounting? (1 mark).
6. Give two control measures against each of the following livestock parasites.
(a) Tsetse-fly (2 marks).
(b) Liverflukes. (2 marks).
7. What term is used in economics to describe the income forfeited when a resource factor is taken away from its best alternative use? (1 mark).
8. (a) What is a marginal cost? (1 mark).
(b) When does a farmer maximize profit in his farm operations? (1 mark).
9. What is the difference between individual owner operator and landlordism types of land tenure? (4 marks).
10. State the economic importance of barley. (2 marks).
11. Differentiate between "flushing" and "steaming up". (2 marks).
12. (a) State the common faults in the operation of knapsack spray. (3 marks).
(b) What factors determine the number of operation to be carried out during land preparation? (4 marks).

SECTION B (30 marks)

13. Differentiate between the following terms:
- (a) Marginal revenue and marginal cost. (2 marks).
 - (b) Statement and a receipt. (2 marks).
14. Name four predisposing causes of pneumonia in livestock. (4 marks).
15. Give two advantages of keeping a Jersey cow instead of a Friesian cow for milk production. (2 marks).
16. State the advantages of proper stocking rate in livestock production. (4 marks).
17. State the use of the levelling box of a tractor. (2 marks).
18. What farming practices bring about the loss of soil fertility? (4 marks).
19. What is the meaning of "steaming up", and how is it important in pig rearing? (4 marks).
20. What is the reason for rearing the following breeds of sheep? (2 marks).
- (a) Hampshire Down
 - (b) Corriedale.
21. List the types of records which can be kept by a dairy farmer. (2 marks).
22. What are the advantages of keeping farm records? (2 marks).

SECTION C (40 marks)

Answer any two questions in this section.

23. (a) What is agricultural credit? (2 marks).
- (b) Name the sources from which farmers can obtain capital to invest in their farm projects. (8 marks).
- (c) What problems do farmers encounter in loan repayments? (4 marks).
- (d) Name types of Agricultural Credits and their uses. (6 marks).
24. (a) What is a crop pest? (2 marks).
- (b) With specific examples, name five different categories of crop pests. (8 marks).
- (c) Why is it important for crop farmers to understand the life cycles of pests? (6 marks).
- (d) Give four methods by which farmers can control crop pests. (4 marks).
25. (a) What harmful effects do liverflukes have on the host animals? (5 marks).
- (b) Describe the diseases anaplasmosis and contagious abortion under the following sub headings.
- (i) Causes
 - (ii) Clinical signs
 - (iii) Prevention and control. (15 marks).