

KCSE AGRICULTURE ASSIGNMENTS
Kenya Certificate of Secondary Education (K.C.S.E.)

FORM 2

AGRICULTURE

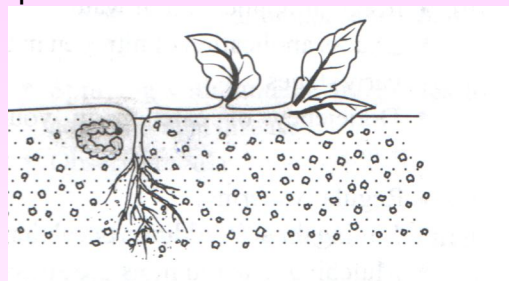
ASSIGNMENT ONE

1. State four symptoms of liver fluke attack in sheep. (2mks)
2. State four control measures of beef tape worm. (2mks)
3. State four ways of controlling lice in poultry. (2mks)
4. State four signs of infestations by external parasites in goats. (2mks)
5. State four characteristics of roughage in livestock feeds. (2mks)
6. State two functions of the crop in digestive system. (2mks)
7. State four factors that affect the digestibility of a feed in dairy animals. (2mks)
8. State four functions of vitamins. (2mks)
9. Prepare 100kg of pig ration containing 20% D.C.P using cereal balancer 10% D.C.P and cotton seed cake 30% D.C.P show your working. (4mks)

10. Define the term Health in livestock. (1mk)
b. State four physiological parameters that can be used as indicators of ill health in livestock. (2mks)

11. What are infectious diseases in livestock? (1mk)
b. Name the causes of infectious diseases in livestock. (1 ½ mks)
c. Explain two different ways through which good nutrition can help to control diseases in livestock. (2mks)
d. Define the term Quarantine. (1mk)

12. b. Identify the cabbage pest shown below. (1mk)



- b. Suggest three possible control measures for the pest. (3mks)

- c. Name two diseases of cabbage crop. (1mk)

13. State four factors considered when selecting a site for a tomato nursery bed. (2mks)

14. State three advantages of single stem pruning over multiple stem pruning. (1 ½ mks)
15. State four qualities of an ideal grain store. (2mks)
16. State four factors that determine the harvesting stage of a crop. (2mks)
17. Give the importance of carrying out the following in a nursery bed.
- Pricking out (1mk)
 - Hardening off (1mk)
18. Study the illustration in the diagram below and answer the questions that follow. (1mk)



- Identify the practice being illustrated. (1mk)
 - State three activities that should be carried out for successful results in the practice shown above. (3mks)
 - At what stage should the practice be carried out in vegetable seedlings. (1mk)
19. State four advantages of row planting. (2mks)
20. State four factors considered in timely planting. (2mks)
21. State four aspects of rainfall that influence agriculture. (2mks)
22. State four effects of applying excessive nitrogen in crop production. (2mks)
23. State two causes of hard pans. (2mks)
24. Name three tertiary operations carried out in land preparation. (1 ½ mks)
25. Name three types of pumps used by farmers. (1 ½ mks)
26. Give four reasons for treating water before use. (2mks)
27. State four factors that affect the quality of farm yard manure. (2mks)

28. Name four breeds of dairy goats. (2mks)
 29. Give two types of labour records. (2mks)
 30. Define agricultural economics. (1mk)

ASSIGNMENT TWO.

SECTION A(Answer all the questions)

1. Define the term Agriculture. 1mk
2. Give the meaning of the following terms as used in Agricultural Production. 1½mks
- i. Olericulture.....

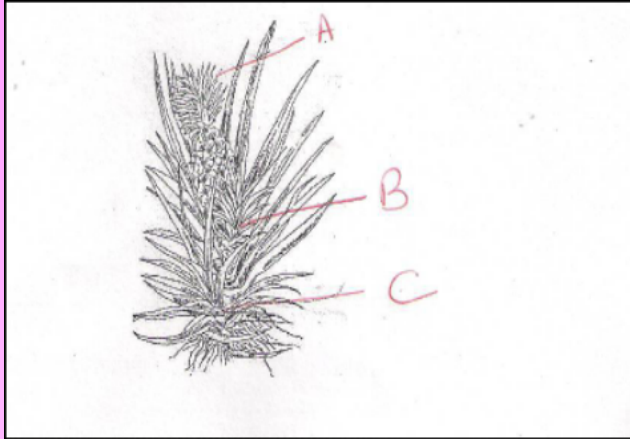
- ii. Pomoculture.....

- iii. Floriculture.....

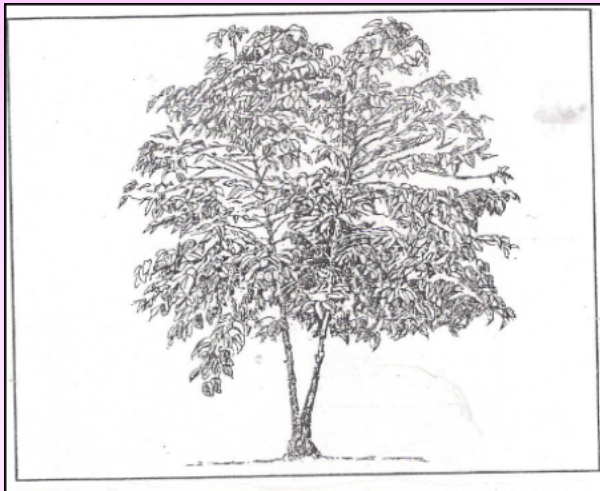
3. State **four** advantages of mixed farming. 2mks
4. State **four** importance of Agriculture. 2mks
5. Give **four** ways in which Health influence Agricultural production. 2mks
6. State **three** negative effects of wind in crop production. 1½mks
7. State **four** aspects of rainfall that influence agricultural production. 2mks
8. a) Name two dual purpose cattle breed reared in Kenya (1mk)
- b) Outline four general characteristics of indigenous cattle breed (2mks)
9. Give **two** reasons why burning is discouraged as a method of clearing land .(1mk)
10. State **three** tertiary operations that are carried out in the farm 1½mks
11. Give **three** importance of carrying out minimum tillage 1½mks
12. State **four** importance of drainage in Agriculture 2mks
13. Give **three** reasons as to why green manure is not commonly used. 1½mks
14. State **three** basic concept of economics. 1½mks
15. State **four** roles of Nitrogenin plants. 2mks
16. Outline **three** characteristics of Nitrogenous fertilizers. 1½mks
17. State **three** impotances of testing soil. 1½mks
18. Give **two** areas to be avoided when carrying out soil sampling. 1mk

SECTION B(Answer all the questions in this section)

19. The following is a diagram of a certain crop. Study it carefully and answer the questions that follow.



- I. Identify the crop 1mk
 - II. Label the parts labeled A, B and C. 1½mks
 - A.....
 - B.....
 - C.....
 - III. State **four** factors to be considered when selecting materials for planting. 2mks
 - IV. State **four** factors which determine the depth of planting. 2mks
20. The following is a pruned crop. Study it carefully and answer the questions that follows.



- i. Identify the method of pruning. 1mk

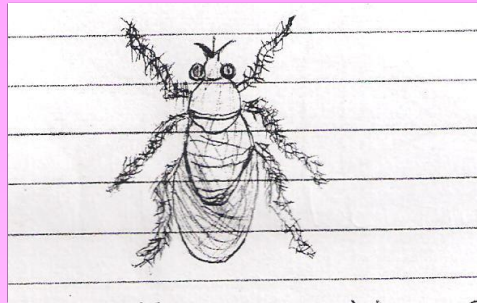
.....
- ii. Give **four** disadvantages of using the above method of pruning. 2mks
- iii. Apart from the above give any other method of pruning coffee. 1mk

iv. State **four** factors which determine the time of harvesting crops.

2mks

21. Study the
answer the

diagram below and then
questions that follows:-



- a) Identify the parasite shown above (1mk)
- b) Name the livestock species attacked by the parasite above (1½ mks)
- c) How does the above parasite obtain its food from the host? (1mk)
- d) What are the harmful effects of the parasite you have mentioned in (a) above?(2mks)
- e) How would a farmer control the above parasite (2mks)

SECTION C.

(Answer any TWO questions in this section.)

22a) State five reasons for keeping animals healthy 5mks

b) State 5 predisposing factors to livestock diseases. 5mks

c) Discuss FIVE importances of crop rotation in crop production. 10mks.

23 (a) State and explain FIVE nursery management practices. 10mks

(b) Describe 6 factors influencing spacing of crops.. 6mks

(c) state FOUR methods of preparing planting materials 4mks

24. a) Describe importance of Drainage as a land Reclamation method. 6mks.

b. Discuss 6 characteristics of fertile soil. 6mks.

c. Explain any 4 factors to consider in choosing seed rates. 8mks.

ASSIGNMENT THREE

SECTION A

40 MKS

Answer all question in this section

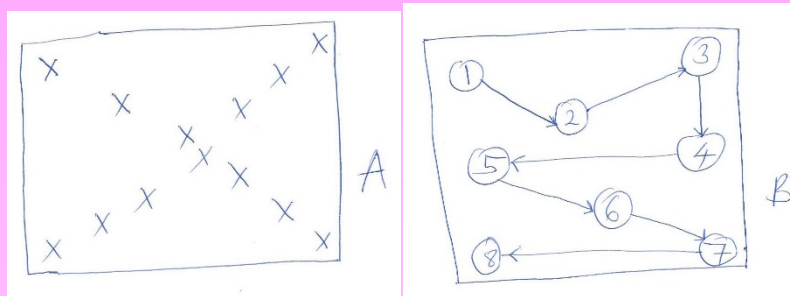
1. State three ways through which agriculture contribute to industrial development. (3mks)
2. Name three factors that influence shifting cultivation. (3mks)
3. State two categories of parasites that affect livestock production. (2mks)
4. List two maintenance practices carried out the following farm tools. (6mks)
 - a) Wheel barrow
 - b) Milking pail
 - c) Wool shears
5. State two reasons why a farmer should prepare land before planting. (2mks)
6. Name three methods a farmer can use when doing tertiary cultivation. (3mks)
7. State two disadvantages of plastic pipes in water conveyance. (2mks)
8. State two importance of treating farm water before using it. (2mks)
9. List two methods of preparing compost manure. (2mks)
10. State two characteristics of a dairy cattle breed. (2mks)
11. State two uses of farm records. (2mks)
12. What does the following initials represent in fertilizer description N.P.K. (3mks)
13. Differentiate between the following terms.
 - a) Straight fertilizer and compound fertilizer. (2mks)
14. A farmer was advised to apply 180 kg CAN/ha when top-dressing the maize crops. If the C.A.N. available in shops contain 21% N. Calculate the amount of nitrogen applied per hectare. (2mks)
15. State two advantage of using seeds as planting materials. (2mks)
16. Name two methods a farmer can use to break seed dormancy. (2mks)

SECTION B

20 MKS

Answer all questions in this section.

17a) Study the diagrams below and answer the questions that follow



a) Identify the soil sampling methods shown above. (2mks)

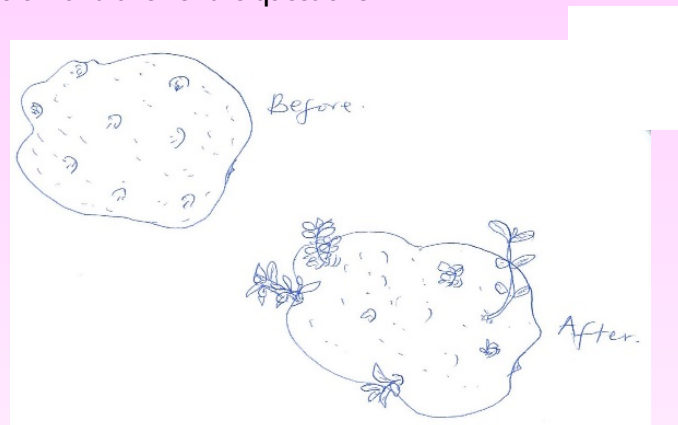
A

B

b) State three types of information written on a soil sample before it's taken to the laboratory for testing. (3mks)

c) State four areas where soil samples should not be collected for sampling. (4mks)

18. Study the diagram below and answer the questions



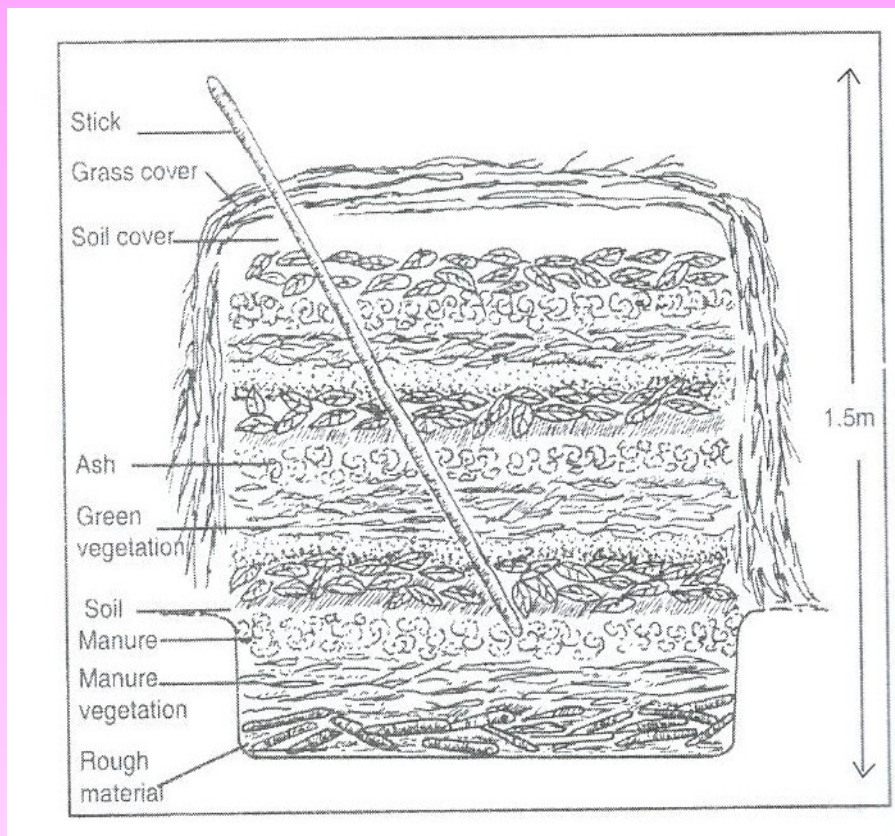
a) Name the practice above. (1mk)

b) State two advantages of the above practice on iris potatoes. (2mks)

c) Name two methods used when planting crops.

(2mks)

9. Study the diagram below and answer the questions that follow.



a) Identify manure preparation method above.

(4mks)

i) Wood ash

ii) Rotten manure

iii) Stick

iv) Top soil

c) State one reason why manure heap should be turned at least every 3 to 4 weeks.

(1mk)

.....

SECTION C:

40 MKS

Answer any two questions in this section

20a) Explain five factors that determine the quality of farm yard manure. (10mks)

b) Discuss five importance of keeping livestock in Kenya today. (10mks)

21a) Explain five methods through which a soil loses its fertility. (10mks)

b) Describe five factors that affect the rooting of cuttings in vegetative propagation. (10mks)

22a) Explain five methods a farmer can use when applying fertilizer to crops. (10mks)

b) State and explain five reasons why farm tools should be maintained. (10mks)

ASSIGNMENT FOUR.

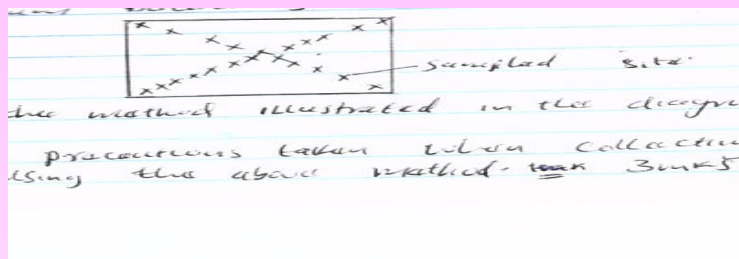
SECTION A (30MKS)

1. What is Health (1mk)
2. State 4 symptoms of potassium deficiency in crops.(2mks)
3. State the information contained in a composite sample of soil before being taken to the laboratory. (1½mks)
4. Give 4 disadvantages of using vegetative propagation materials.(2mks)
5. Given that maize is planted at a spacing of 75 by 25 cm. calculate the plant population in a plot of land measuring 8 by 6m. (3mks)
6. Differentiate between monocropping and intercropping (1mk)
7. Define the following terms as used in agriculture
Rogueing (1mk)
Gapping (1mk)
8. State any four disadvantages of using non capped multiple stem pruning in coffee.(2mks)
9. Give 4 characteristics of a good grain store.(2mks)
10. 10. State the intermediate host of the following livestock parasite.

- (a) Taeniasolium ½mk
 - (b) Taeniasagnata ½mk
 - (c) Liver fluke ½mk
11. Give 4 control measures of Tse tse flies.(2mks)
 12. State disadvantages of overhead irrigation.(2mks)
 13. State the uses of the following farm tools and equipment
 - (a) Dibber(1mk)
 - (b) Garden trowel (1mk)
 - (c) Stock and die (1mk)
 - (d) Pipe wrench (1mk)
 14. State the function of the following materials in preparation of compost manure.
 - (a) Well rotten manure (1mk)
 - (b) Wood ash (1mk)
 - (c) Top soil (1mk)
 15. Differentiate between Essex saddleback and Wessex saddleback.(1mk)

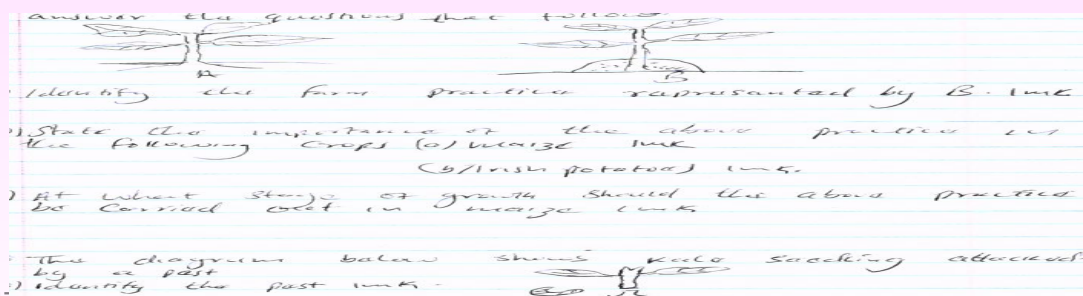
SECTION B (30MKS)

16. The diagram below shows a method of soil sampling



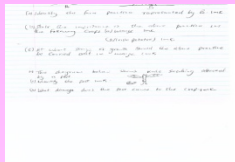
- (a) Name the method illustrated in the diagram above.(1mk)
- (b) State 3 precautions taken when collecting the soil for testing using the above method.(3mks)
- (c) Give 4 reasons why soil from the farm is tested.(4mks)

17. The diagram below shows a practice carried out on various crops on the farm. Study them carefully and answer the questions that follow.



- (a) Identify the farm practice represented by B.(1mk)
- (b) State the importance of the above practice in the following crops
 - a) Maize(1mk)
 - b) Irish potatoes (1mk)
- (c) At what stage of growth should the above practice be carried out in maize. (1mk)

18. The diagram below shows Kale seedling attached by a pest.



- (a) Identify the pest.(1mk)
 - (b) What damage does that pest causes to the crop.(1mk)
 - (c) State two methods of controlling the pest.(2mks)
19. State any 5 general characteristics of indigenous breed of cattle.(5mks)
20. State any 5 factors considered when selecting a nursery site.(5mks)
21. State conditions that necessitate land clearing (4mks)

SECTION C(40mks)

- 22.a) State and explain 5 characteristics of a fertile soil (10mks)
 - b) State symptoms of attack by a liver flukes in livestock.(5mks)
 - c) describe any five factors influencing crop rotation.(5mks)
23. Describe reasons for pruning in crops. 5x 2=10mks.
- b)discuss 5 effects of HIV/AIDS and ill-health on Agriculture.(5mks)
 - c) discuss 5 problems associated with the use of organic manure.(5mks)

ASSIGNMENT FIVE

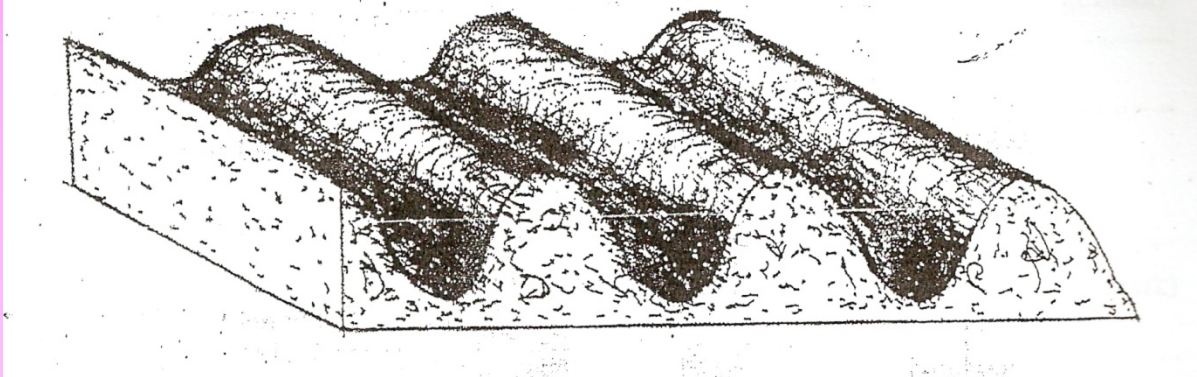
SECTION A(30MKS)

- 1. List any four types of records a farmer should keep.(2marks)

2. Give two conditions in agricultural production under which opportunity cost is zero (1 mark)
- 3 Give **four** reasons-for keeping livestock health records on the farm (2 marks)
4. State 4 reasons for primary cultivation.(2marks)
5. Distinguish between soil structure and soil texture (1mark)
6. State one function for each of the following:
- (a) shovel; (1 mark)
- (b) strip cup. (1mark)
- 7 Differentiate between olericulture and pomoculture (2mks)
- 8 State four conditions under which shifting cultivation is practiced. 2mks
- 9 State 3 reasons why agriculture is important in Kenya's economy (3mks)
- 10 Name the exotic cattle with
- i) Highest butter fat content(1marks)
- ii) Lowest butter fat content(1mark)
11. State two characteristics of goats that make them adaptable to arid areas of Kenya.(1mark)
- 12 Give four ways by which soil loses its fertility (2marks)
- 13 State four characteristics that make a crop suitable for green manuring. (2marks)
- 14 State four ways in which burning of vegetation may lead to loss of soil fertility. (2 marks)
15. What is the function of each of the following ingredients in the preparation of compost manure?
- (a) Wood ash (1 mark)
- (b) Top soil (1 mark)
- 16 Give 4 reasons why water treatment is important. (2marks)

SECTION B (30MARKS)

17. The diagram below illustrates a final seedbed after a tertiary operation done during land preparation. Study it carefully and answer the questions that follow.

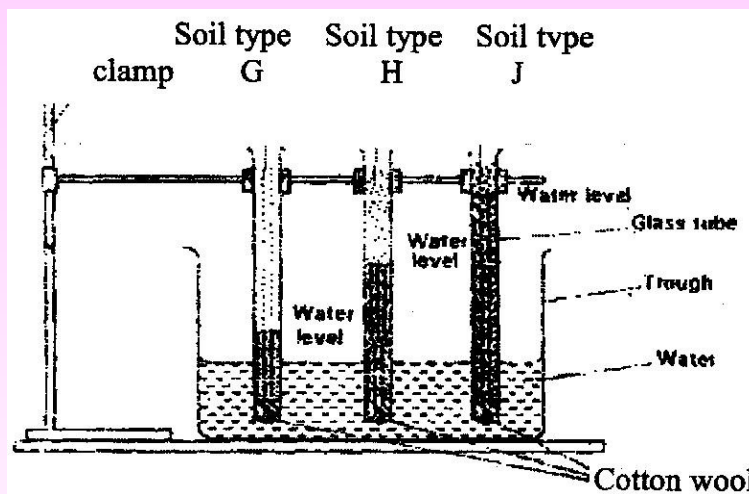


(a) Name the tertiary operation carried out on the seedbed (1mark)

b) Give two advantages of planting crops on a final seedbed illustrated above (2 marks)

18 a) List two aspects of light that influence crop growth.(2marks)

b) The diagram below shows an experiment set up using soil types G , H and J and observations made after 24 hours. Study the diagram and answer the questions that follow.

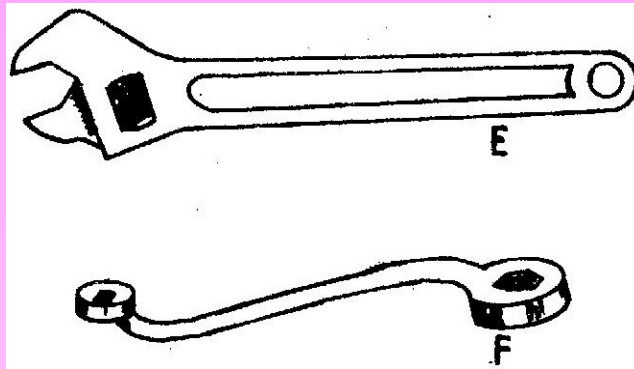


i) What is the experiment represented above designed to study? (1mark)

ii) Name the soil types G and J (1mark)

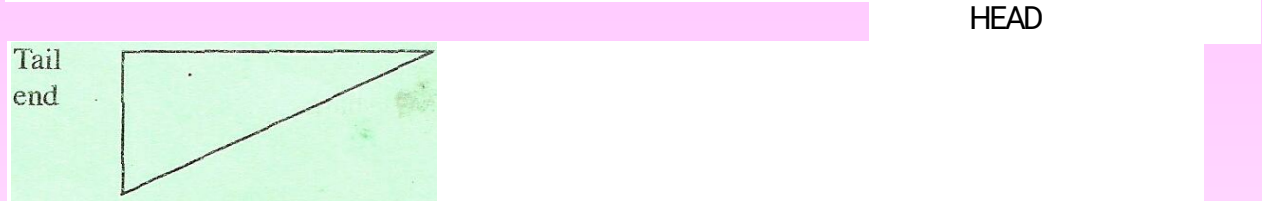
iii) What is the characteristic texture of soil types G and J?(2marks)

- 19 iv) State how a farmer would improve the structure of soil type G. (1 mark)
Study the diagrams of workshop tools shown below



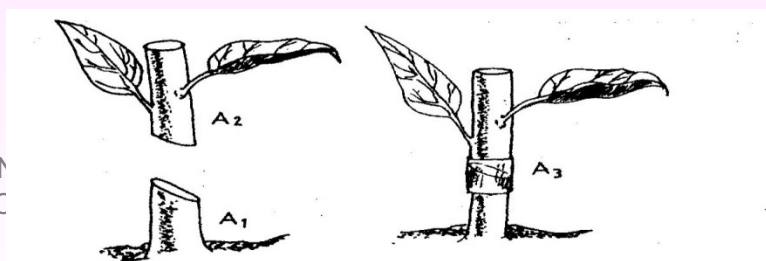
- (i) Identify the tools labeled E and F (1 mark)
E _____
F _____
- (ii) What functional advantage does tool E have over tool F? (1 mark)

20. The diagram below illustrates the general shape of a cattle breed. Study it carefully and answer the questions that follow.



- (a) Identify the type of breed illustrated by the above shape (1 mark)
(b) Give an example of a breed in (a) above. (1 mark)
(c) State four physical characteristics of the type of breed identified in (a) above. (2 marks)

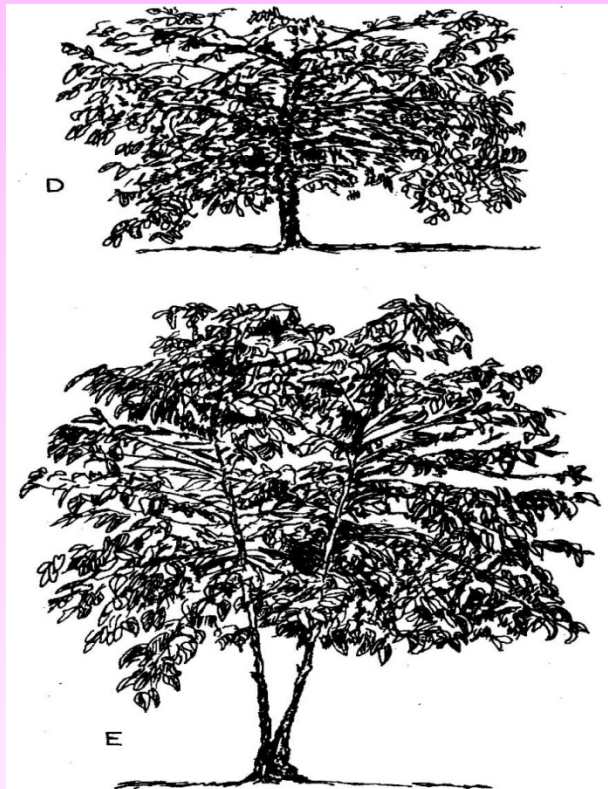
21. The diagrams labeled A₁, A₂, A₃, and B below illustrate materials and methods of vegetative propagation. Study them and answer the questions that follow.



(a) Name the parts labeled A₁, and A₂ (2 marks)

(b) Name the methods of propagation illustrated in diagrams A₃ and B (2 marks)

22. The diagrams labeled D and E below are illustrations of coffee established using two different formative pruning systems. Study them and answer the questions that follow.



(a) Name the system of pruning illustrated in diagram D above (1 mark)

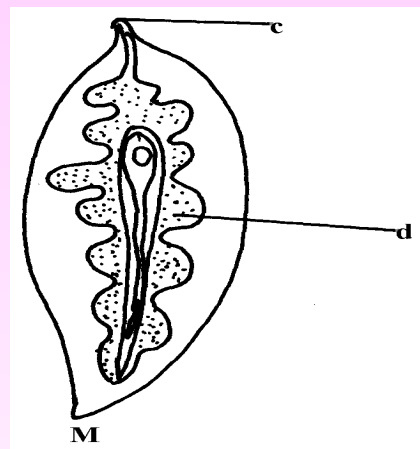
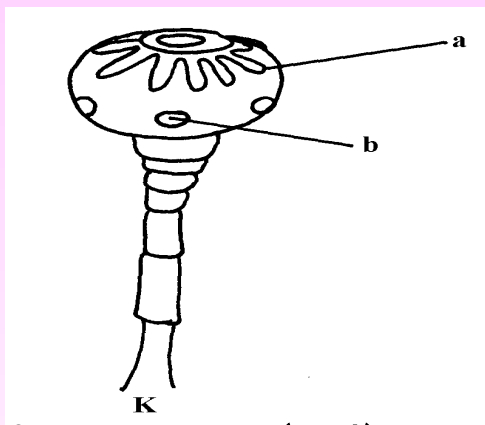
(b) State 2 disadvantages of the pruning system labelled E (2 marks)

23 (a) The diagrams below represent two ways in which a crop was pruned. Study them carefully and answer the questions that follow.



- (i) Which diagram represents the correct way of pruning? (1 mark)
- (ii) Give a reason for your answer in (i) above. (1 mark)
- (b) State two ways in which pruning assists in controlling crop diseases. (1 mark)

24. Below are diagrams showing different types of internal parasites. Study them carefully and answer the questions that follow:-



- a) Identify the parasites **K & M** (1mark)
- b) Name the organs where each parasites is found (2marks)

c) Give the intermediate host of parasite M (1mark)

SECTION C (40 MARKS)

25. a) State and explain five factors which may influence the spacing of crops (10 marks)

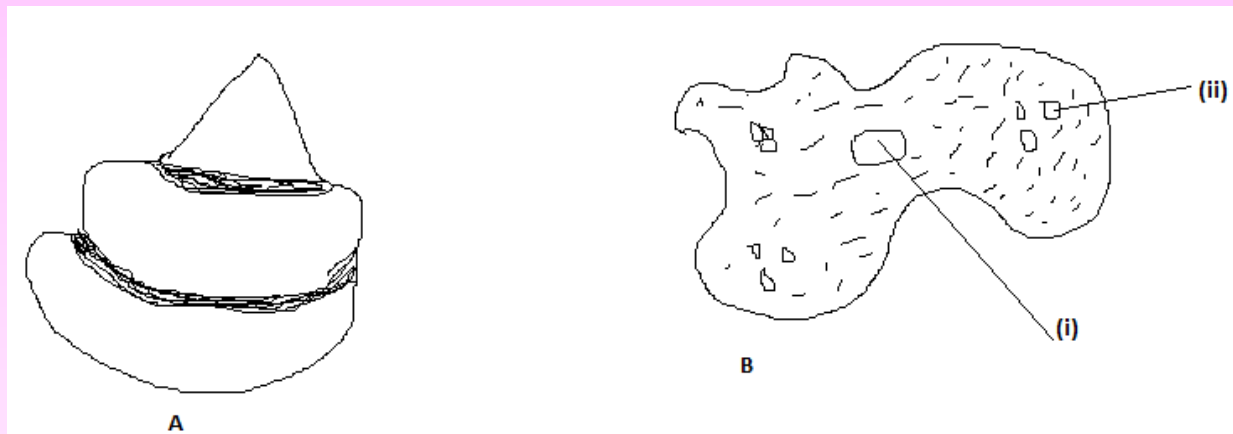
b) State and explain five advantages of crop rotation (10marks)

26 (a) Describe ten signs of ill-health in livestock (10 marks)

b). Explain measures used to control livestock diseases. (10 marks)

ASSIGNMENT SIX

1. List four characteristics of plantation farming (4mks)
2. Give four benefits of Agro forestry (4mks)
3. Differentiate between soil structure and soil texture (2mks)
4. State four reasons for treating water in the farm (4mks)
5. State four disadvantages of using organic manure (4mks)
6. Name two species of camel (2mks)
7. State four control measures of tsetse flies (4mks)
8. What is meant by Bos Inducus? (1mk)
9. Name four dairy breeds of goat (4mks)
10. Why do we keep farm record (1mk)
11. The diagram below illustrates some types of soil structure. Study and answer the question that follow.



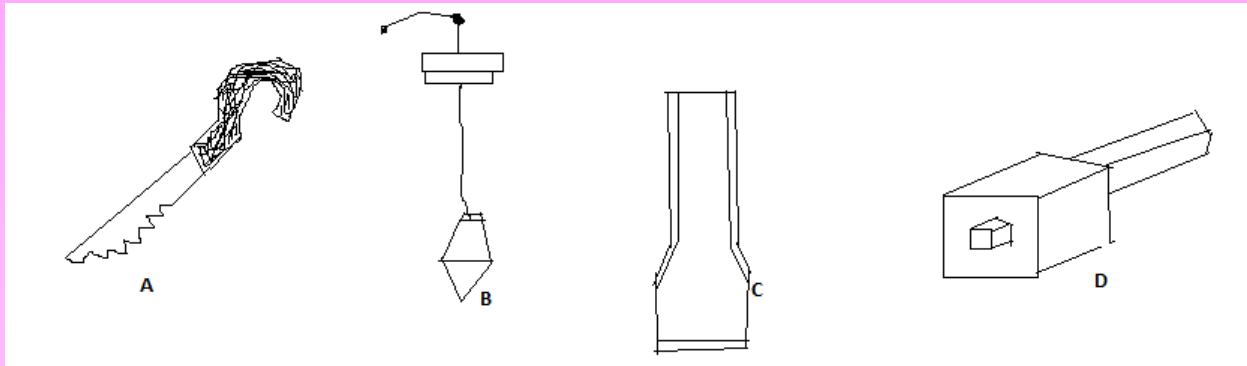
(a) Identify the type of soil structure illustrated bAB

(b) Name parts labeled (i) and (ii) (2mks)

(c) State two effects of soil structure A in crop production

(2mks)

12. Below are farm tools



(a) Name the tool above

(4mks)

b) State use of each tool above

(4mks)

(c) State two maintenance that can be carried to tool D

(2mk)

(d) Classify the following tools at their appropriate categories

(4mks)

	Categories
A	
B	
C	
D	

13. (a) State the importance of livestock in the farm

(4mks)

(b) Explain differences between Bos Indicus and Bos Taurus breeds

(10mks)

(c) List six breeds of rabbit

(6mks)

14. (a) Describe the importance of livestock husbandry

(15mks)

(b) State four breeds of dairy cattles

(4mks)

(c) Which dairy breeds produce high butter fat content?

(1mk)

15. (a) Discuss seven method by which soil is able to loss its fertility

(14mks)

(b) State six characteristic of a fertile soil

(6mks)

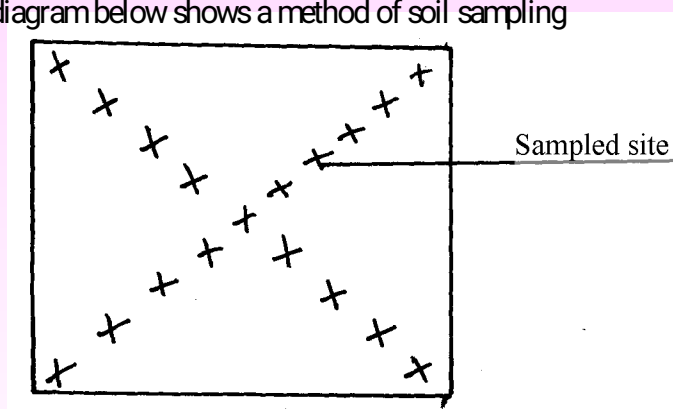
ASSIGNMENT SEVEN

SOIL FERTILITY 11

1. State **four** advantages of applying lime in clay soil

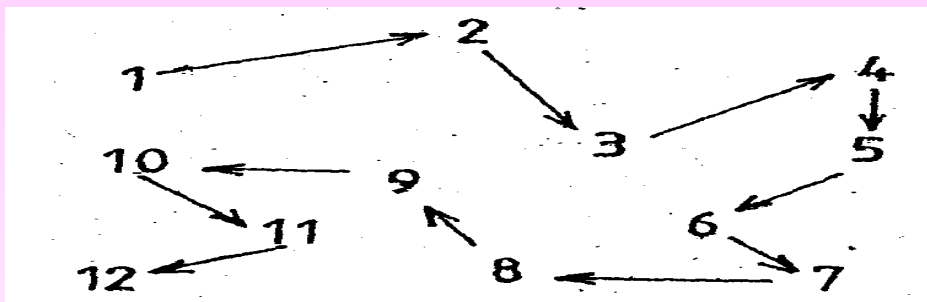
2. a) Give the form in which the following elements are absorbed by crops

- i) Sulphur
 - ii) Nitrogen
 - iii) Carbon
 - iv) Magnesium
- b) List **three** effects of nitrogen to plants
3. Mr. Malombe of Shinyalu village prepared to top dress 10 hectares of nappier grass using sulphate of ammonia (21%N). Sulphate of ammonia is applied at rate of 150kg per hectare. Calculate
- a) The quantity of sulphate ammonia fertilizer the farmer will need for 10 hectares
 - b) The number of 50kg bags of fertilizer he will purchase
4. Give **two** disadvantages of using farmyard manure
5. State **four** factors which influence the stage at which the crops are harvested
6. A form **four** student was given a sample of a fertilizer with the following characteristics:
- (i) Grey in colour
 - (ii) It is granular
 - (iii) Causes no corrosion
 - (iv) It is highly hygroscopic
 - (v) It is neutral
- (a) Identify the fertilizer
 - (b) At what stage of growth of maize should it be applied?
 - (c) Calculate the amount of K_2O contained in 400kg of a compound fertilizer 25:10:5
7. State **two** pieces of information that soil sample should have before being taken to the laboratory for testing
8. A compound fertilizer bag has the labels 20-20-0. What do the figures stand for?
9. Give **four** functions of sulphur in crops
10. State **four** advantages of lining as a measure of soil improvement
11. State **two** methods of increasing soil PH
12. (a) State **three** factors that determine the amount of inorganic fertilizers needed to be applied to crops
- (b) What are the necessary precautions observed when carrying out soil sampling?
13. List **three** functions of nitrogen in crops
14. (a) Distinguish between fertilizer grade and fertilizer ratio
- (b) List **four** elements whose deficiency results into chlorosis in plants
15. The diagram below shows a method of soil sampling



- (a) Name the method illustrated in the diagram
 (b) State **three** precautions taken when collecting the soil for testing using the above method
 (c) Give **four** reasons why soil from the farm is tested
16. A farmer was advised to apply compound fertilizer 20-20-10 on an orchard measuring 20m X 10m at the rate of 80kg/ha. Calculate the amount of fertilizer the farmer would require for the orchard. (Show your working)
17. a) A compound of fertilizer has a fertilizer grade of 25:10:5. calculate the amount of phosphorus fore sent in 400kg of this fertilizer
 b) The diagram below illustrate methods of collecting soil sample from a field

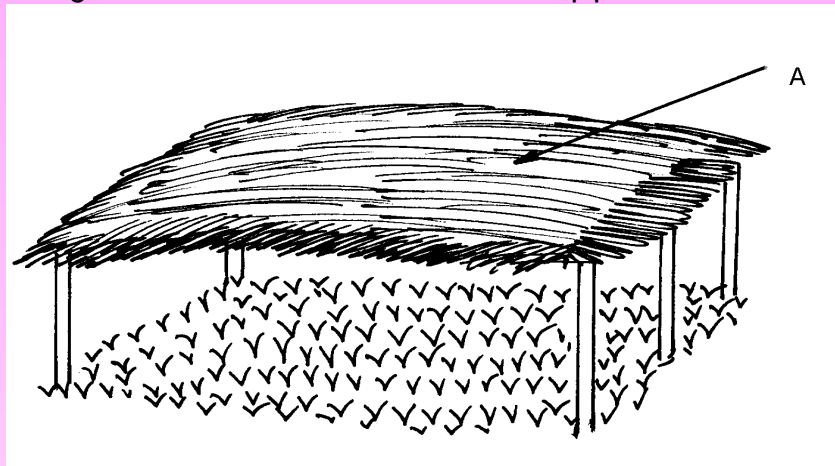
- i) Identify the methods illustrated 1-
 ii) xx
 iii) State **three** importance of carrying out soil sampling and testing
18. (a) What is an incomplete compound fertilizer?
 (b) State **four** reasons why a maize crop continued showing deficiency of potassium despite applications recommended amount of potassic fertilizer
19. The diagram below shows a soil sampling method.



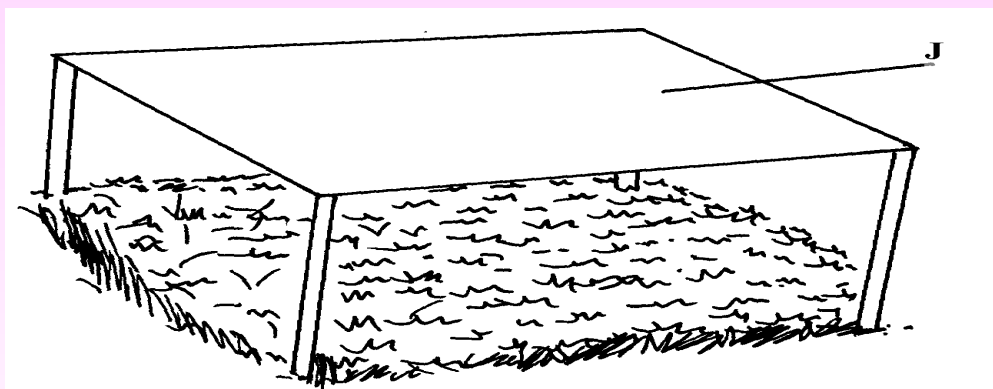
- (a) Identify the method illustrated above
 (b) Name any **two** spots in a farm that should be avoided during sampling
 (c) Describe the steps followed while carrying out the exercise in (a) above

ASSIGNMENT 8
CROP PRODUCTION III
NURSERY MANAGEMENT PRACTICES

1. Name **three** methods of grafting that are used in propagation of plants
2. State **two** practices done during hardening-off of seedlings in a nursery bed.
3. List **two** methods of budding used in crop propagation
4. List **four** management practices carried out on a nursery bed
5. Outline **two** importance of tissue culture in crop propagation
6. Differentiate between a nursery bed and a seedling bed
7. Give **four** advantages of under sowing in pasture production
8. Give **four** advantages of under sowing in pasture production
9. The diagram below shows a structure used in crop production:



- (a) Identify the structure above
- (b) Give a reason for carrying out each of the following practices in the structure shown above
 - (i) Pricking out
 - (ii) Hardening off
- (c) State three importance of the part labeled A in the above structure
10. (a) Describe the siting and establishment of a crop nursery
- (b) Explain management practices in a crop nursery
11. State **four** importance of thinning seedlings in the nursery bed
12. State the difference between a seedling bed and a seedbed.
13. Below is a diagram of a nursery for raising the seedlings



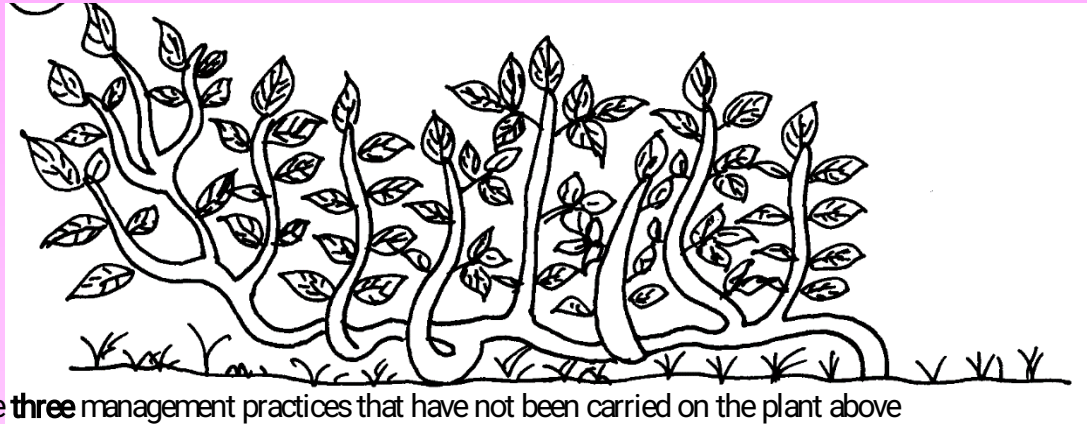
- (a) State **two** advantages of having the part labeled J
- (b) State any **three** management practices that should be carried out on the nursery from the time

seedlings emerge to the stage of transplanting

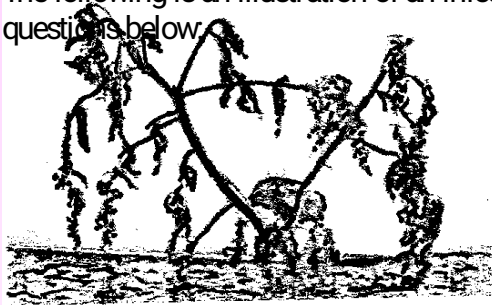
ASSIGNMENT 9

CROP PRODUCTION V (VEGETABLES)

1. The diagram below is of a tomato plant. Study it and answer the questions that follow:-



- State **three** management practices that have not been carried on the plant above
 - For each management practice state **one** reason why it should be carried out
 - Name **two** diseases that attack the crop above in the field
2. Describe the production of tomatoes (*Lycopersicon esculentum*) under the following subheadings
- Varieties
 - Nursery establishment
 - Field management practices
3. List **four** symptoms of late blight in tomatoes
4. State any **four** factors considered when grading tomatoes for fresh market
5. State **two** ways of controlling purple blotch in onions
6. The following is an illustration of an infected tomato plant. Study it carefully and answer the questions below



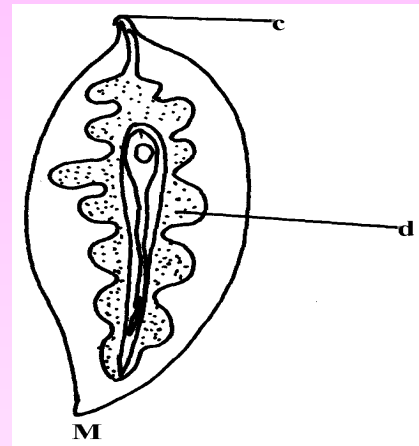
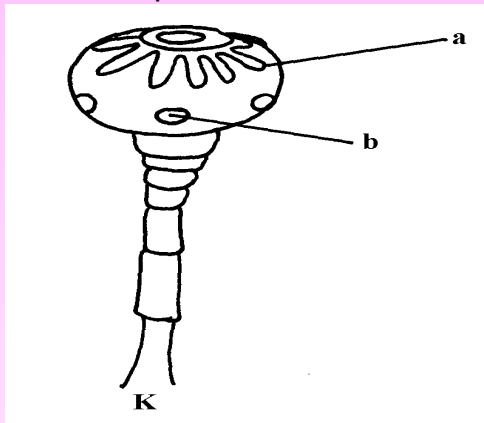
- Identify the disease which may have caused the condition shown in the illustration
 - Name any other crop which may be affected by the disease identified in (a) above
 - Mention **two** other factors which can lead to the same condition as shown by the illustration
 - State **two** measures that can be used to control the disease named in (a) above
7. Give **two** ways in which pruning helps to control diseases in tomatoes
8. Outline **four** ecological requirements for cabbages

9. a) Mention **two** pests which attack tomatoes
b) Give **two** causes blossom end rot disease in tomatoes
10. List three ecological requirements of tomatoes.

ASSIGNMENT 10

(LIVESTOCK HEALTH II) (LIVESTOCK PARASITES)

1. Name **two** chemical methods used in deworming cattle
2. a) state **six** effects of parasites
b) Describe the life cycle of *Taenia solium* species of tapeworm
c) State **four** control measures of the tapeworm
3. Give **two** functions of calcium in dairy cows
4. Give **two** control measures of fleas in a flock of sheep
5. Give **two** measures a poultry farmer can use to control fleas in flock
6. State **two** reasons why drenching alone is not an effective method of controlling internal parasites
7. Give **two** forms in which a tape worm is found in livestock
8. Below are diagrams showing different types of internal parasites. Study them carefully and answer the questions that follow:-



- a) Identify the parasites **K & M**
- b) Identify the parts labelled
- c) Name the organs where each parasites is found
- d) Give the intermediate host of parasite **M**
9. Give any **two** effects of external parasites that are harmful to livestock
10. Outline the procedure followed when hand-spraying cattle to ensure effective use of acaricides to control ticks
11. a) A boar gained 90Kg live weight after eating 360Kg pig finisher meal over a period of time. Calculate the feed conversion ratio
b) Describe digestion in the four stomachs of the ruminant animal
c) Give the significance of lubrication system
12. State **four** ways of controlling tsetseflies

13. Name **two** types of roughages
14. Name the common milk breed of goats reared in Kenya
15. Why are the element calcium and phosphorus important in the diet of young livestock?
16. Give **two** parasites of cattle which are also disease vectors
17. Give **three** control measures of fleas in a flock of layers

**FOR MARKING SCHEMES CALL OR TEXT MR
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