



EXAMINATIONS COUNCIL OF ZAMBIA

JUNIOR SECONDARY SCHOOL LEAVING EXAMINATION (GRADE 9) – 2014

AGRICULTURAL SCIENCE 501/2 PAPER 2 (SPECIMEN)

(INTERNAL AND EXTERNAL CANDIDATES)

TIME: 2 HOURS

MARKS: 80

INSTRUCTIONS TO CANDIDATES

- 1 Pull out the Answer Booklet from the question paper.
- 2 Write your **name, examination number, school/centre name and code** on the Answer Booklet.
- 3 Write your answers.
- 4 Answer **ALL** the questions

www.eczpastpapers.com

INFORMATION FOR CANDIDATES

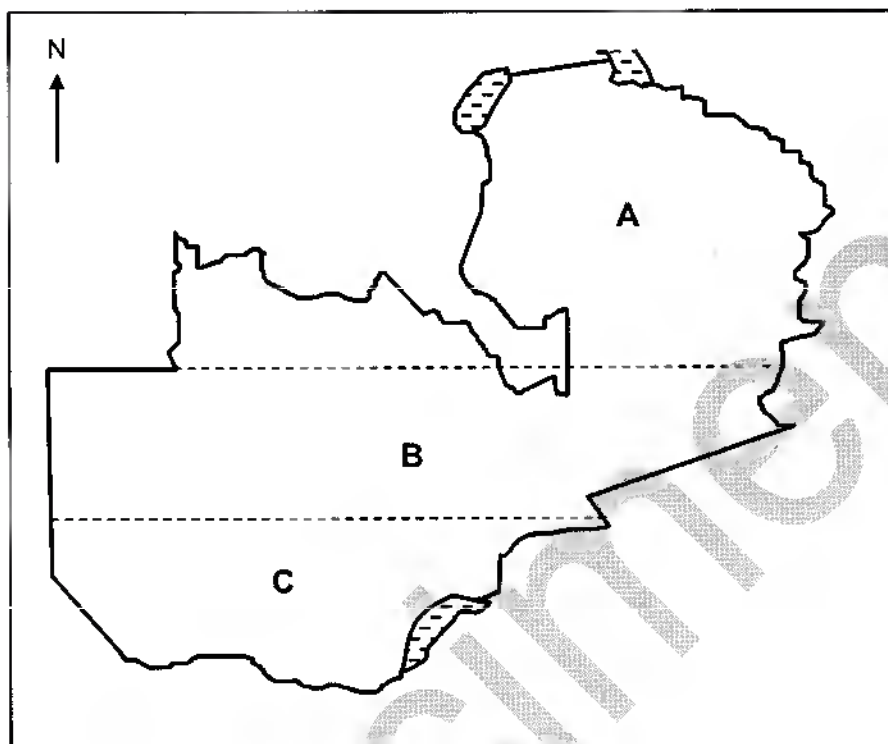
Cell phones are not allowed in the examination room.

Calculators are not allowed in the examination room.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.

1 AGRICULTURE IN ZAMBIA

Study the map of Zambia shown below and answer the questions that follow.

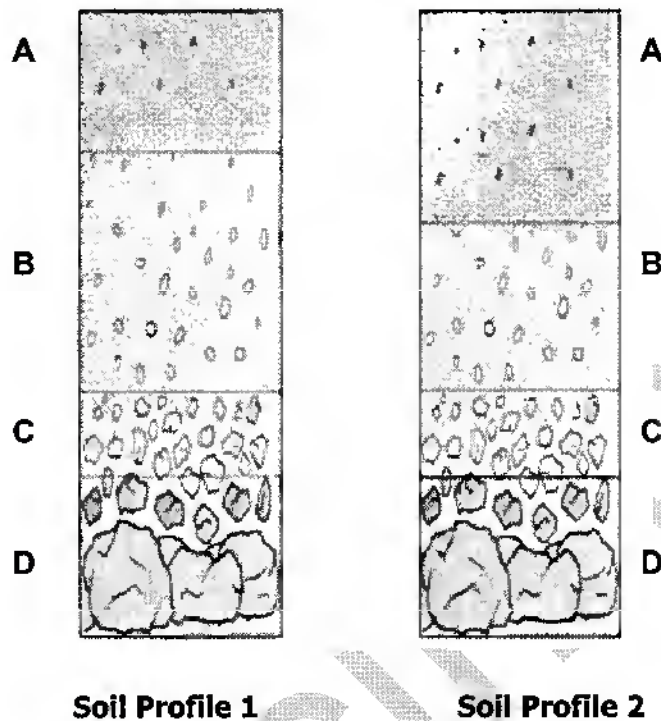


- (a) What is the average amount of rainfall for region 'B'? www.eczpastpapers.com [1]
- (b) Name the Agro-ecological regions marked A, B and C. [3]
- (c) Explain the difference between small scale farmer and commercial farmer. [3]
- (d) Give **three** reasons why some areas are suitable for commercial farming in Zambia. [3]

[Total 10 marks]

2 SOIL SCIENCE

The diagram below shows two soil profiles taken from different locations in a school.



- (a) (i) Which soil profile, 1 or 2 can support agriculture production successfully? www.eczpastpapers.com
[1]

- (ii) State why the soil profile you have identified can support agriculture production. [1]

- (b) The following is a label on a bag of a type of fertilizer.

50 kg
N: P: K
10 20 10

- (i) State the meaning of the letters N:P:K on the bag. [3]
- (ii) When is this type of fertilizer applied to a crop? [1]
- (c) A maize crop requires 200kg of fertilizer per hectare. Calculate the amount of fertilizer that can be applied on a seed bed measuring 10m long and 1m wide. [4]

[Total 10 marks]

3 CROP PRODUCTION

- (a) (i) State **three** adverse effects of weeds on crops. [3]
- (ii) How can these adverse effects be prevented? [1]
- (iii) Why is post-emergence application of herbicides more desirable to control weeds than pre-emergence application in heavy rainfall areas? [1]
- (b) The diagram below shows a wilting tomato plant.



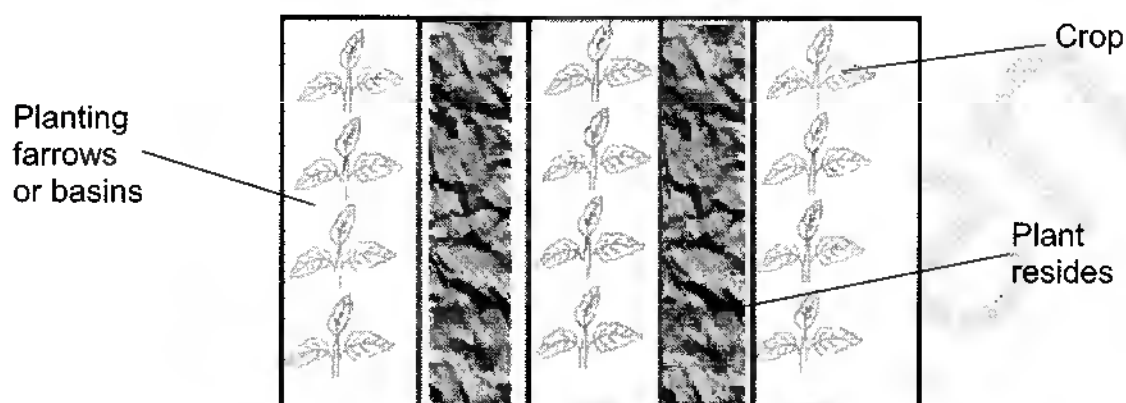
The plant was properly supplied with water, but the condition persisted.

- (i) Name the pest that can cause this symptom on the plant. [1]
- (ii) Give a reason for your answer in 3 (b) (i) above. [1]
- (iii) Why is hardening carried out before transplanting vegetable seedlings? [1]
- (c) (i) Why is it recommended to use certified seed in crop production? [1]
- (ii) Name a fertilizer which is commonly used where maize is to be planted in Zambia. [1]

[Total 10 marks]

4 FORESTRY AND CONSERVATION FARMING

- (a) A farmer grew maize and groundnuts on one plot. What type of farming system was being practiced? [1]
- (b) What advantages will a farmer have for practicing the system in 4 (a)? [2]
- (c) The diagram below shows a type of farming practice.



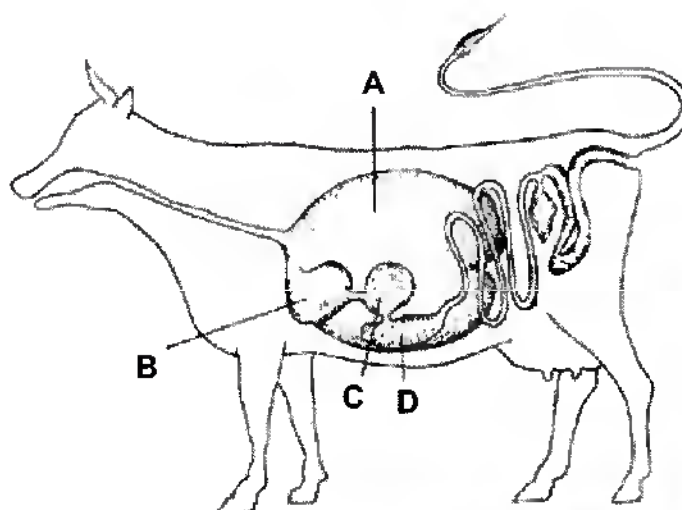
- (i) What kind of farming practice is shown above? [1]
- (ii) Why are farmers encouraged to practice such a system on their farms? [2]
- (d) State the role trees play in the following:
- (i) Soil fertility [2]
- (ii) Infiltration of water [2]

www.eczpastpapers.com

[Total 10 marks]

5 LIVESTOCK PRODUCTION

(a) Study the diagram of an animal shown below.

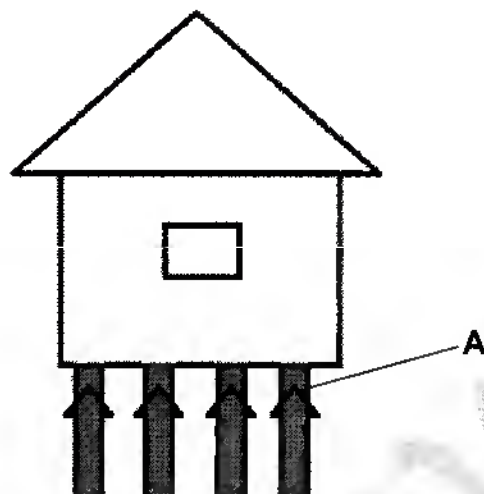


- (i) What type of digestive system is shown in the diagram above? [1]
- (ii) Write the letter of the chamber in which true digestion starts. [1]
- (iii) What is the difference between the digestive system of a pig and the one shown in the diagram? [2]
- (iv) Which other animal has a similar digestive system as the animal shown above? [1]
- (b) In Animal Production what does the term maintenance ration mean? [1]
- (c) Give **two** ways a farmer can prevent and control tick born disease on the farm. [2]
- (d) (i) A cow was serviced on 1st November 2013. In which month is it likely to calf down? [1]
- (ii) Explain how you arrived at the answer **d (i)**. [1]

[Total 10 marks]

6 FARM STRUCTURES

(a) Study the diagram of the storage structure shown below.

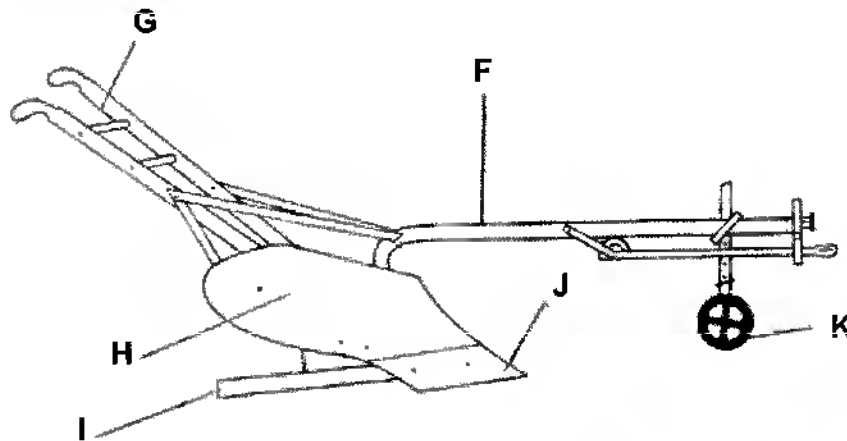


- (i) Identify the storage structure shown in the diagram. [1]
- (ii) Name the part labelled A [1]
- (b) State some features in the diagram which make it unsuitable for grain storage. [2]
- (c) Name **one** improved structure suitable for grain storage. [1]
- (d) List **three** characteristics of a structure suitable for grain storage. [3]
- (e) Describe what a farmer should do to the storeroom before storing the next grain. [2]

[Total 10 marks]

7 FARM MECHINERY

The diagram shows a farm implement.



- (a) What is the name of the farm implement? [1]
- (b) Name the parts of the farm implement labelled with letters **F**, **G** and **H**. [3]
- (c) Explain the functions of **I**, **J**, and **K**. [3]
- (d) Give **three** activities a farmer should carry out to prepare an animal drawn implement for storage. [3]

[Total 10 marks]

8 FARM MANAGEMENT

- (a) Name **two** resources a farmer requires for production. [2]
- (b) A farmer got K1000 from the bank to buy fertilizer. What type of credit did he get? [1]
- (c) What are the main reasons why a farmer must keep records at a farm for production? [2]
- (d) A farmer obtained a loan of K2000 to be paid at a rate of 20% for two years. Calculate the simple interest the farmer will pay in two years. [2]
- (e) What do the following terms mean?
- (i) Opportunity cost
 - (ii) Enterprise [2]
- (f) Name **one** of the laws a farmer should observe when producing crops in terms of inputs. [1]

[Total 10 marks]

www.eczpastpapers.com