**FORM FOUR END OF TERM TWO EXAMINATION 2019**

**443/1 AGRICULTURE PAPER 1**

**TIME: 2 Hours**

**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**INDEX NUMBER: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CLASS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Instructions to candidates**

1. *write your name and index number in the spaces provided above.*
2. *Sign and write the date of examination in the spaces provided above.*
3. *This paper consists of three sections:* ***A, B*** *and* ***C.***
4. *Answer all the questions in sections* ***A*** *and* ***B****.*
5. *Answer any* ***two*** *questions in section* ***C.***
6. *All answers should be written in the spaces provided in the Question paper.*
7. *This paper consists of* ***9*** *printed pages.*
8. *Candidates should check the question paper to ascertain that all the pages are printed as indicated and that no questions are missing.*
9. *Candidates should answer all Questions in* ***English.***

**For Examiner’s use only**

|  |  |  |  |
| --- | --- | --- | --- |
| **Section** | **Question** | **Maximum**  **Score** | **Candidate’s**  **Score** |
| **A** | **1-15** | **30** |  |
| **B** | **16-20** | **20** |  |
| **C** |  | **20** |  |
|  | **20** |  |
| **Total Score** | | **90** |  |

**SECTION A (30 Marks)**

*Answer* ***all*** *Questions in the spaces provided.*

1. State **four** advantages of organic farming. **(2marks)**
2. Give **four** factors that can increase seed rates in crop production. **(2marks)**
3. State **four** roles of organic matter in sandy soils. **(2marks)**
4. State **four** reasons for practicing minimum tillage. **(2marks)**
5. What is meant by each of the following in crop production?
6. Crop rotation **(1mark)**
7. Mulching **(1mark)**
8. Give **four** reasons for inverting soil (furrow) slices during primary cultivation. **(2marks)**
9. State **four** cultural ways of controlling couch grass *Digitaria scalarum.*  **(2marks)**
10. a) Name **three** vegetative parts that can be used to propagate pineapples. **(1½marks)**

b) State **three** disadvantages of vegetatively propagating pineapples. (1½marks)

1. Name **three** sources of underground water **(1½marks)**
2. What is meant by each of the following in agro-forestry?
3. Pollarding **(1mark)**
4. Coppicing **(1mark)**
5. Lopping **(1mark)**
6. State the **information** included in a sales receipt when a farmer is selling eggs **(2½marks)**
7. State **two** reasons for practicing agro-forestry on a;
8. River bank **(1mark)**
9. Steep slope **(1 mark)**
10. State **three** disadvantages of using plastic pipes to convey water. **(1½marks)**
11. State **three** causes of Blossom End Rot in tomatoes. **(1½marks)**
12. What is **meant** by the term preference and choice as used in agricultural economics? **(1mark)**

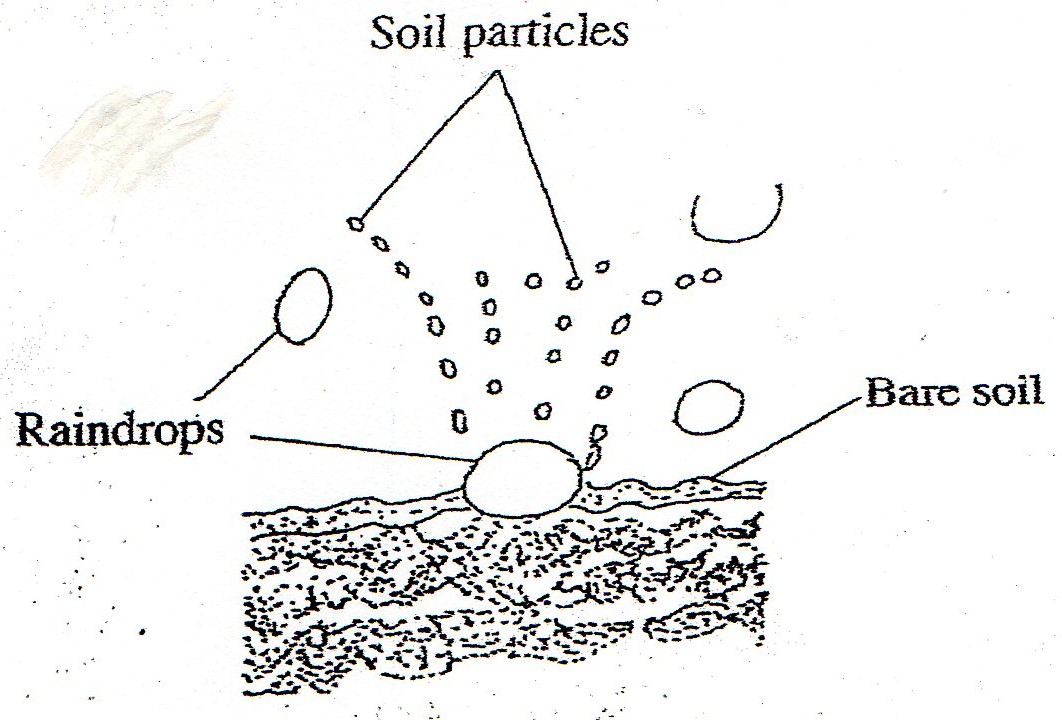
**SECTION B (20 Marks)**

*Answer* ***all*** *the Questions in the spaces provided.*

1. a) **Distinguish** between straight and compound fertilizers. **(1 mark)**

b) A farmer applied **200kg** of CAN (**20% N**) per hectare on his **five** hectares maize crop. Calculate the **amount of nitrogen** the farmer applied on his crop. Show your working. **(4 marks)**

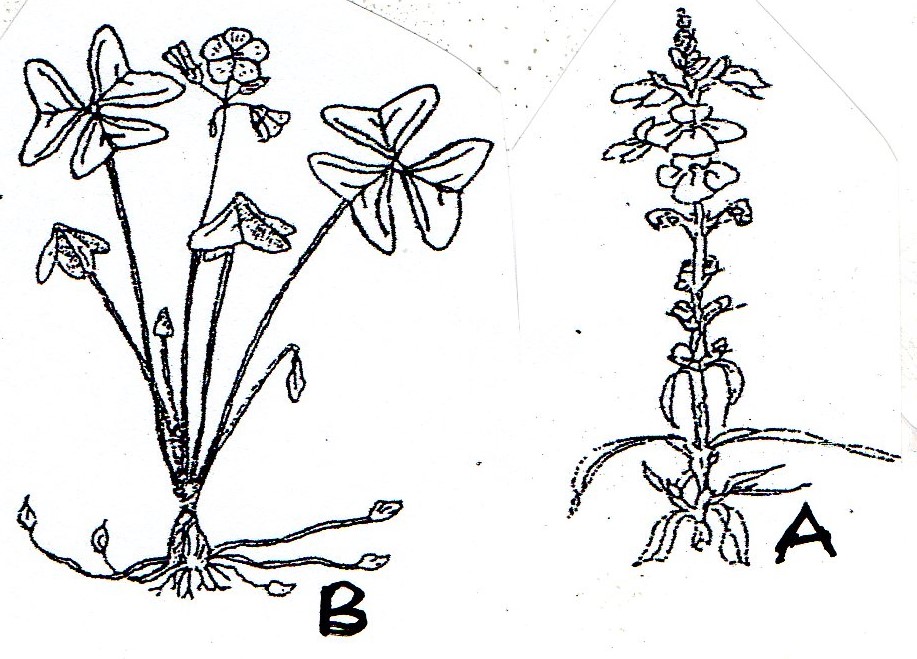
1. The diagram below illustrates a type of soil erosion.



1. Identify the **type** of soil erosion **(1 mark)**
2. How does the type of erosion shown above **occur**? **(2marks)**
3. How does **cover cropping** help to control the type of erosion shown above? **(2marks)**
4. The table below shows the population and gross domestic products of countries A and B

|  |  |  |
| --- | --- | --- |
| **Country** | **Gross Domestic Product**  **(million Ksh)** | **Population**  **(million)** |
| **A** | 1800 | 36 |
| **B** | 1200 | 15 |

1. Calculate the **per capita** income for each country. Show your working. **(2marks)**
2. Which of the two countries is **more developed** economically? **(1mark)**
3. Give a **reason** for your answer in (b) above. **(1mark)**
4. How can **agriculture** increase the gross domestic product of an economy? **(1mark)**
5. The diagrams below show weeds **A** and **B.**



1. Identify weed **A** **(1mark)**
2. State one reason why weed **A** is referred to as a parasitic weed. **(1mark)**
3. Give a reason why it is **difficul**t to control weed **B.** **(1mark)**
4. Which **category** of herbicide will be most suitable for controlling weed B.?**(1mark)**
5. Name a disease that weed **B** can transmit to cereal crops. **(1mark)**

**SECTION C (40 marks)**

*Answer any two Questions from this section in the spaces provided after Question 22.*

1. a) **Describe** the various risks and uncertainties in crop farming. **(10 marks)**

b) **State** the functions of young farmers clubs in Kenya. **(5 marks)**

c) **Give** the reasons for land registration in Kenya. **(5 marks)**

1. a) **Explain** **five** ways in which the Kenyan government can improve maize production to ensure food security in the country. **(10 marks)**

b) **Why** is pruning done in crop production? **(10 marks)**

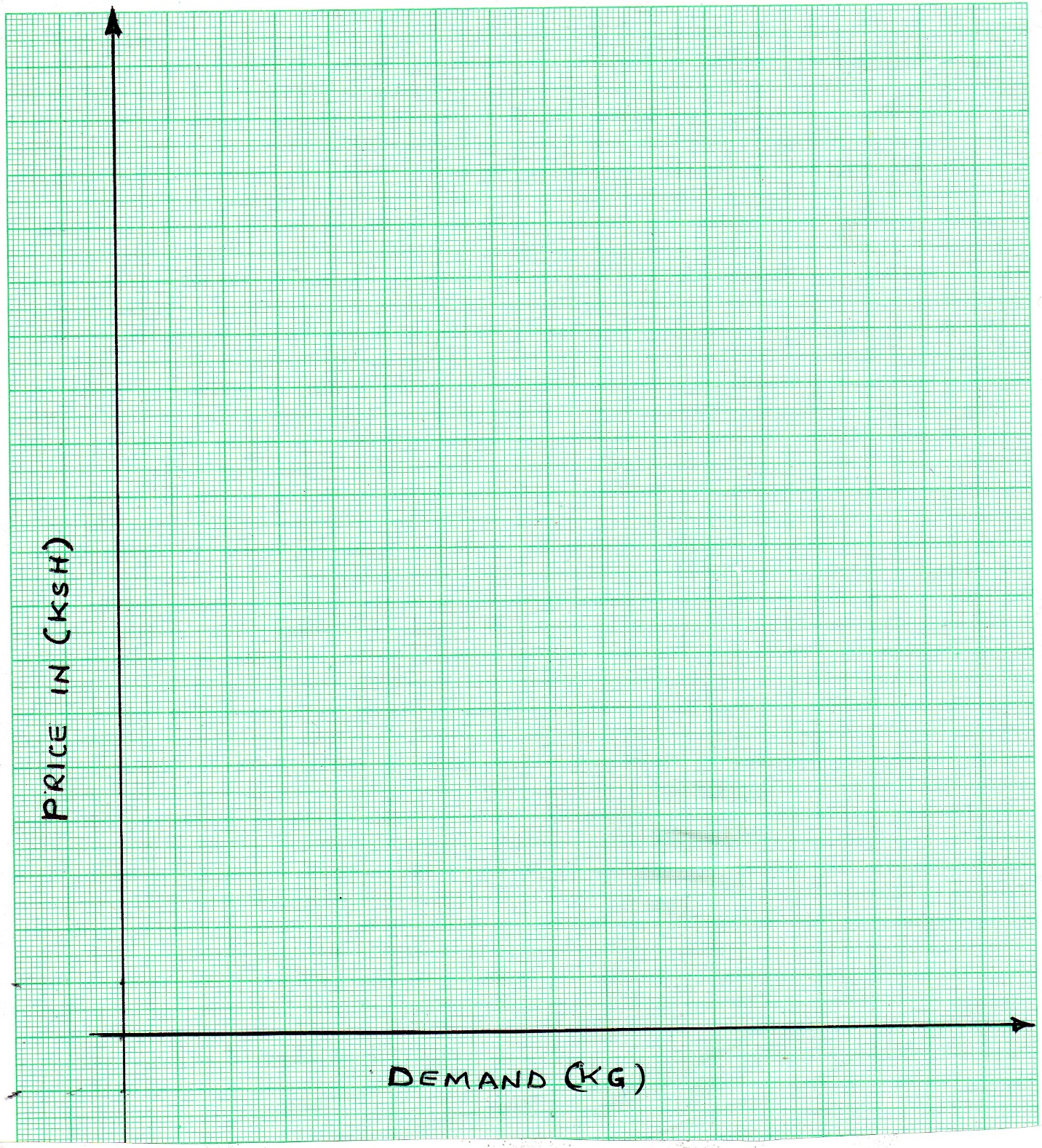
1. a) The table below gives information on the supply and demand schedules for tomatoes on a market.

**Table 1**: Prices and Quantities of tomatoes supplied.

|  |  |
| --- | --- |
| **Tomatoes (Kg)** | **Price per Kg (Ksh)** |
| 150 | 16.00 |
| 130 | 14.20 |
| 125 | 13.80 |
| 112 | 13.00 |
| 106 | 12.70 |
| 85 | 11.80 |
| 50 | 10.60 |
| 42 | 10.40 |
| 30 | 10.20 |
| 25 | 10.10 |

**Table 2**: Prices and Quantities of tomatoes demanded.

|  |  |
| --- | --- |
| **Tomatoes (Kg)** | **Price per Kg (Ksh)** |
| 80 | 18.00 |
| 87 | 16.70 |
| 101 | 15.50 |
| 119 | 14.10 |
| 135 | 13.20 |
| 155 | 12.40 |
| 171 | 11.80 |
| 185 | 11.30 |
| 191 | 11.10 |
| 205 | 10.84 |

1. Using the above data, **plot supply and demand curves** on the same axes. The axes have been labelled for you. **(7mks)** 
2. Determine the price at which **120kg** of tomatoes were supplied on the market. **(1mark)**
3. How many kilograms of tomatoes were bought at the market price of **Ksh13.00?** **(1mark)**
4. What was the **equilibrium price** for tomatoes on the market? **(1mark)**

b) Describe the production of **maize** under the following subheadings:

1. Seedbed preparation **(4marks)**
2. Planting **(3marks)**
3. Harvesting **(3marks)**