**NAME: ……………………………………..………………………ADM NO:.…………….……….……..**

**Date: ………………………………………. INDEX NO: ………………………………**

***KENYA CERTIFICATE OF SECONDARY EDUCATION***

**443 / 1**

**AGRICULTURE PAPER ONE**

**FORM FOUR TERM 1 2020**

**TIME: 2 HOURS**

**INSTRUCTIONS TO CANDIDATES**

1. Write your name and admission number in the spaces provided above.
2. This paper has **THREE** sections: A, B and C.
3. Answer **ALL** the questions in section A and B and any **TWO** questions in section **C.**
4. **ALL** answers **MUST** be written in the spaces provided.

**FOR EXAMINERS USE ONLY**

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION** | **QUESTIONS** | **MAXIMUM SCORE** | **CANDIDATES SCORE** |
| **A** | **1 – 17** | **30** |  |
| **B** | **18 – 21** | **20** |  |
| **C** |  | **20** |  |
|  | **20** |  |
| **TOTAL** |  | **90** |  |

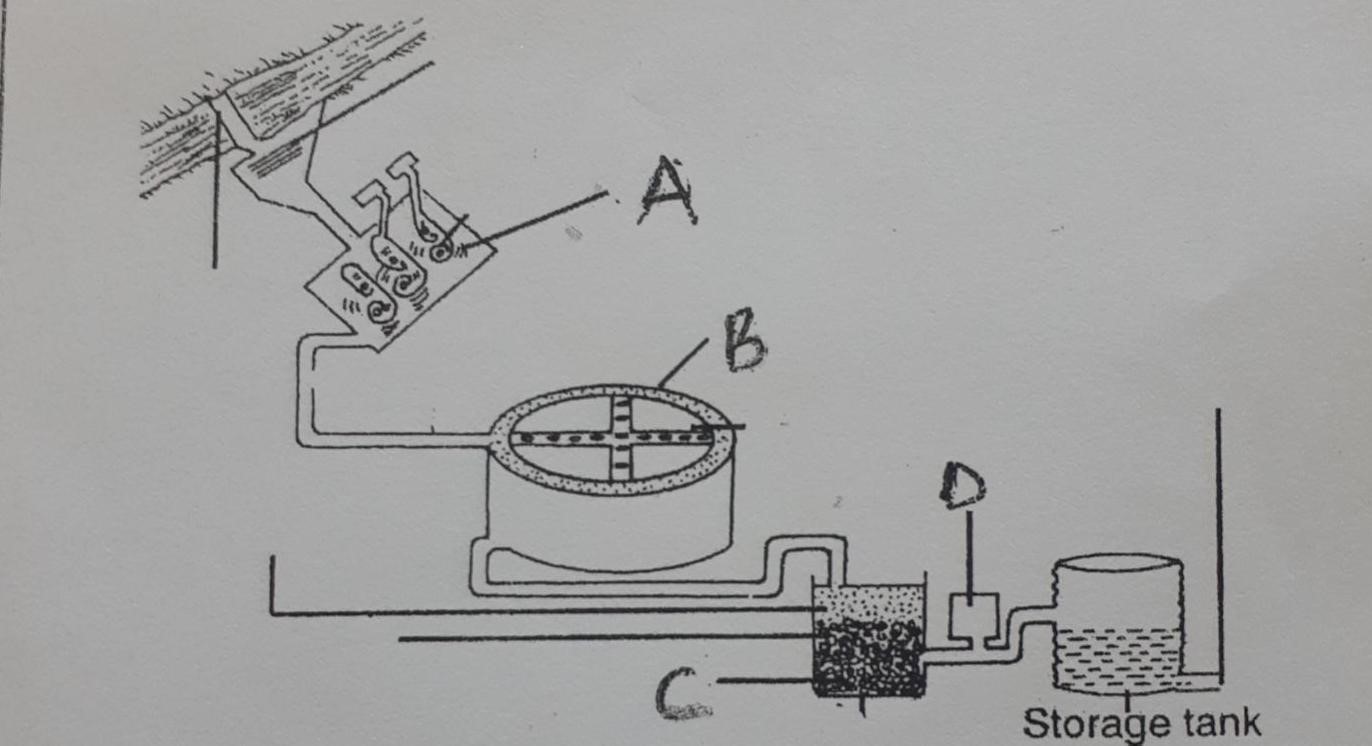
**SECTION A (30 MARKS)**

1. Name three properties of soil that are influenced by its texture. (11/2 mks)

1. State three functions of nitrogen in crops. (11/2mks)
2. Give three effects of soil living organism which benefits plant growth. (11/2mks)
3. Name four practices used to achieve minimum tillage. (2mks)
4. State three farming practices farmers use to increase light intensity in tomato field. (11/2mks)
5. Give four qualities of a mother plant from which vegetative propagation material should be obtained.(2mks)
6. Outline two ways of controlling damping off disease on cabbage seedlings in nursery. (1mrk)
7. Give three disadvantages of non-capped multiple stem pruning in coffee. (11/2mrk)
8. State four ways of harvesting water on the farm. (2mks)
9. Name three fungal diseases in crops. (11/2 mk)
10. State four factors that affect the efficiency of pesticide. (2mks)
11. Give four advantages of rotation grazing. (2mks)
12. Outline four ways of controlling maize stalk borer. (2mks)
13. State four advantages of land consolidation. (2mks)
14. State four qualities that plants used for green manure preparation should have. (2mks)
15. Give four advantages of organic farming. (2mks)
16. State four characteristics of organic soil. (2mks)

**SECTION B (20MKS)**

1. The diagram below illustrates the stages of water treatment process, study it and answer the question that follow.



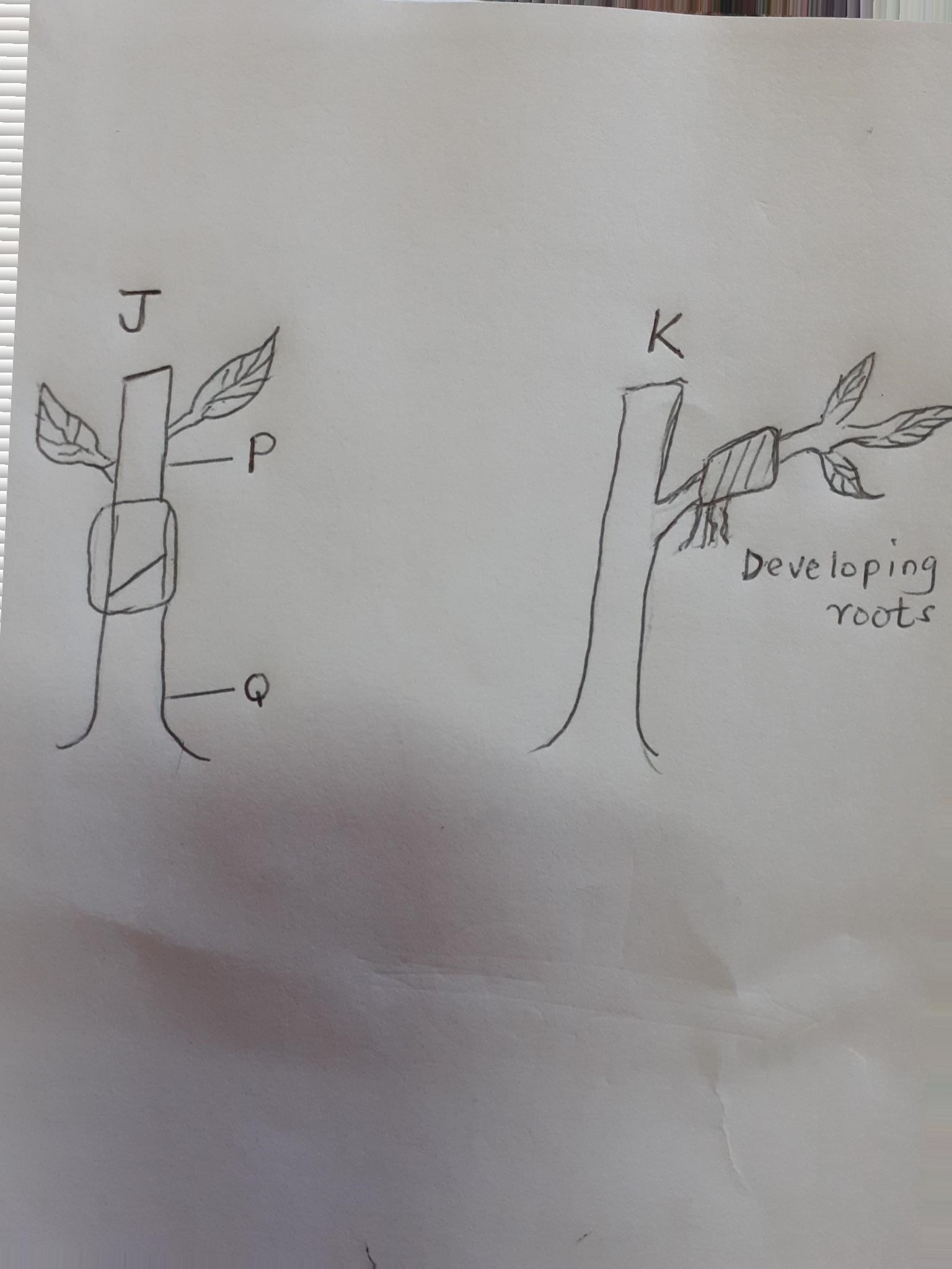
1. Name the stages of water treatment labelled. (3mks)

B

C

D

1. Explain the treatment of water done in the stage labelled A. (4mks)
2. The diagrams below illustrate methods of vegetative propagation. Study it and answer the question that follows.



1. Name the methods of vegetative propagation illustrated in diagram. (2mks)

J

K

1. Name the part labelled P and Q in diagram J. (2mks)

P

O

1. State three advantages of method of propagation labelled J. (3mks)
2. The diagram below illustrate a type of weed



1. Identify the weeds illustrated. (1mk)

1. Give one reason why it is difficult to control the weed. (1mk)
2. State two harmful effects of the weed on crop production. (2mks)
3. Calculate the amount of N: P: K 20:10:5 needed to supply 30kg of K2O. (2mks)

(Show your working)

**SECTION C (40 MARKS)**

***ANSWER ANY TWO QUESTION S FROM THIS SECTION***

* 1. Explain five factors that would increase the seed rate. (5mks)
  2. Give five ways in which the government of Kenya can help to encourage agricultural production. (5mks)
  3. Describe the harvesting of tea. (5mks)
  4. Outline five reasons for keeping farm records. (5mks)

1. 1. Outline six factors that determine the quality of silage. (6mks)

* 1. Explain eight factors that encourage soil erosion. (8mks)
  2. Explain six factors that affect spacing of crops. (6mks)

1. 1. Explain six factors that affect site selection for a nursery bed. (6mks)
   2. Outline eight effects of weed on agricultural production. (8mks)
   3. Explain six importance of crop rotation. (6mks)