



**CPR - Nursery establishment  
and industrial crops**

**T006**

**Thursday, 29/7/2021**

**08:30 – 11:30 AM**

**Names**

Index number

**TVET NATIONAL EXAMINATIONS, RTQF LEVEL 5, 2020-2021**

# QUESTIONS and ANSWERS BOOKLET

OPTION/TRADE: **CROP PRODUCTION**

**SUBJECT: Nursery establishment and industrial crops**

ACADEMIC YEAR: 2020-2021

1. Carefully the instructions on page (i) & (ii).

001 NESAD001  
002 NESAD002  
003 NESAD003  
004 NESAD004  
005 NESAD005  
006 NESAD006  
007 NESAD007  
008 NESAD008  
009 NESAD009  
010 NESAD010

[illegible]



# TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

## **INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)**

1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).
2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.
3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.
4. A candidate should answer in the language in which the examination is set. (See page **(ii)**)
5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).
9. Use the last non-lined pages as draft.
10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

# **TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021**

**OPTION/TRADE: CROP PRODUCTION**

**SUBJECT: Nursery establishment and industrial crops**

**DURATION: 3 hours**

## **INSTRUCTIONS TO CANDIDATES: PART II (Question paper)**

The paper is composed of two (2) main Sections as follows:

**Section I: Attempt all the Twelve (12) questions** (60 marks)

**Section II: Attempt any Four (4) questions out of Six (6)** (40 marks)

### **Allowed materials:**

- Ruler and square
- Calculator

### **Note:**

***Every candidate is required to carefully comply with the provided assessment instructions.***

**Section I: Attempt all the Twelve (12) questions (60 marks)**

01. Describe the criteria of site selection for nursery installation. **(5 marks)**
02. You are invited to train farmers how to select good seed quality for sowing during cultural season B. Explain how they can know the viability of their seed through the germination test. **(5 marks)**
03. The five (5) terms in the table below are used in nursery. Match them with their respective descriptions. **(5 marks)**

| Nursery's term   | Description  | Matching |
|------------------|--|----------|
| 1. Seedbed       | A. This is the conditions where viable seed fail to germinate when condition necessary have been provided.                       | 1=       |
| 2. Nursery       | B. An area of land tilled to produce a fine tilth firm and level into which seed will be sown.                                   | 2=       |
| 3. Seed dormancy | C. An area of land in which seedlings are pricked out from seedbed until they are large enough to be put in permanent positions. | 3=       |
| 4. Seedlings     | D. This is any grain, plant or part of the plant used for the plant propagation  | 4=       |
| 5. seed          | E. This is a young plant that has recently grown from the seed   | 5=       |

04. Seed drilling is also called line sowing; this is when seed are sown in line at regular interval. It is the dropping of seeds into the soil.
- a) State three (3) advantages of this operation. **(3 marks)**
- b) State two (2) disadvantages of seed drill. **(2 marks)**
05. A farmer of GAKENKE District needs to sow the agroforestry seeds. However, before sowing the seeds, the pre-treatments are important. Classify these pretreatments into their respective categories. **(5 marks)**
06. Choose the best sentence using False (F) or True(T). **(5 marks)**
- a) The growing medium mixture of clayey soil is one wheelbarrow of soil; two wheelbarrow of sand and two wheelbarrows of manure is (1-2-2)
- b) The growing medium mixture of Sandy soil is one wheelbarrow of soil and one wheelbarrow of manure (1-0-1)

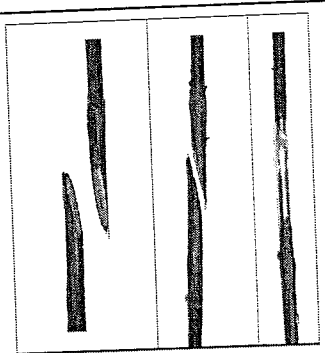
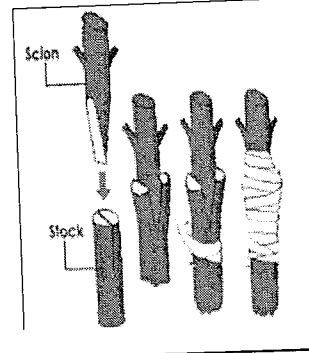
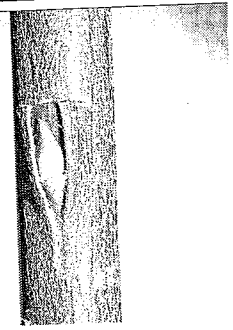
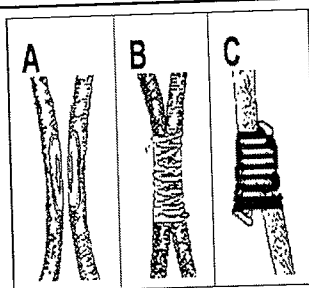
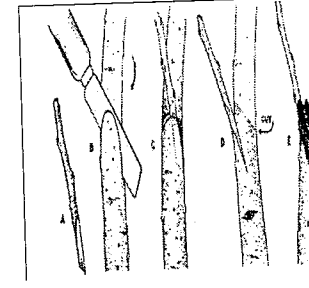
- c. The growing medium mixture of Loamy soil is one wheelbarrow of soil, one wheelbarrow of sand and one wheelbarrow of manure (1-1-1.)
  - d. The association its literally means fungus-root, and describes the mutualistic association existing between a group of soil fungi and higher plants.
  - e. Mycorrhization is based on the plant component providing carbohy drates and other essential organic compounds to the fungi.
07. State the procedures of pots filling and arrangement techniques. **(5 marks)**
08. Suppose your Tea plantation was attacked by aphids (*Toxoptera auranti*). **(5 marks)**
- a) identify the symptoms
  - b) Suggest the way of prevention and control measures of this pest.
09. What are the sugarcane maturity indicators? **(5 marks)**
10. As crop production technician;
- a) Explain why coffee trees need pruning?
  - b) Give three (3) main systems of pruning conducted in coffee plantation. **(5 marks)**
11. Discuss about dry and wet processing of coffee. **(5 marks)**
12. Both coffee and tea are raised from either seeds or cuttings. It is however beneficial to raise seedlings in a nursery to economize planting material. Outline the advantage of using:
- a) Cuttings
  - b) Seeds propagation. **(5 marks)**

**Section II: Attempt any Four (4) questions out of Six (6) (40 marks)**

13. Grafting is a horticultural technique whereby tissues from one plant (scion) is inserted into those of another (root-stock) so that the two sets of vascular tissues may join together.

a) What is the purpose of grafting? **(5 marks)**

b) The sketches below illustrate the types of grafting. Name them in the table. **(5 marks)**

|   |   |   |
|---|---|---|
|    |    |  |
| A.  | B.  | C.  |
|  |  |   |
| D.  | E.  |   |

14. Prick out of the seedlings is the process of transferring young and tender seedlings from seedbeds into containers (pots). Pricking out should be carried out when the seedlings reach a height of 2 cm. What is the process of doing it? **(10 marks)**

15. A farmer GATERA needs to grow seedlings in the nursery to get the trees cultivated in season A in GATSIBO District. He does not know the way of sowing agroforestry seeds.

a) Clarify the types of sowing that can be applied in the nursery. **(5 marks)**

b) What are the possible methods applied to seeds sow? **(5 marks)**

16. A farmer of pyrethrum from Musanze District, Gataraga sector, needs to increase its production and know the signs of mature pyrethrum for harvesting.

**(10 marks)**

a) What are the fertilizer requirements in nursery for pyrethrum?

b) Indicate the common drying method of pyrethrum.

c) Name at least three (3) Districts where pyrethrum crop is produced in Rwanda?

17. a) How the plucking table is established for Tea plantation?

b) Mention the four (4) tea production zones in Rwanda.

**(10 marks)**

18. Sugarcane is a cash crop that is the most cultivated in different low elevations on flat or slightly sloping land.

a) According to longitudinal section explain four (4) main parts of roots tip.

**(2 marks)**

b) Enumerate four (4) growth phases of sugarcane.

**(2 marks)**

c) Detrashing refers to removal of unwanted bottom dry and green leaves at regular intervals. Outline the importance of them.

**(6 marks)**





