



**FOR – Soil Conservation**  
**T019**

**08:30 – 11:30 AM**

**Names**

**Index number**

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

## QUESTIONS and ANSWERS BOOKLET

## OPTION/TRADE: FORESTRY

**SUBJECT: Soil Conservation**

ACADEMIC YEAR: 2020-2021

Read carefully the instructions on page (i) & (ii).

**FOR EXAMINER'S USE ONLY**

[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: FORESTRY**

**SUBJECT: Soil Conservation**

**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) How can you conserve the environment? **5 marks**
- (02) The soil fertility decline is described as deterioration of soil in physical, chemical and biological properties. Pinpoint the main processes caused that problem. **5 marks**
- (03) Identify any five (5) signs observable as indicators of sheet erosion on field. **5 marks**
- (04) Isolate two (2) plant species that show the flooded soil and three (3) plant species that indicate the acidic soil. **5 marks**
- (05) Soil conservation measures should aim to prevent or to minimize the soil loss by cultural methods and mechanical ways.  
Mention five (5) biological ways. **5 marks**
- (06) Soil conservation measures should aim to prevent or to minimize the soil loss by cultural methods and mechanical ways.  
Pinpoint the mechanical ways used for conserving the soil. **5 marks**
- (07) Identify any five (5) types of wastes observed in nature. **5 marks**

- (08)** What are the factors that influence water erosion? **5 marks**
- (09)** Identify any three (3) human causes of deforestation which accelerate the Soil erosion. **5 marks**
- (10)** Explain why it is important to control soil erosion in agricultural farming. **5 marks**
- (11)** Indicate three (3) main types of terraces existing in Rwanda and carryout the aim of terracing operation. **5 marks**
- (12)** List the phases of terracing activities. **5 marks**

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

- (13)** Soil erosion is a problem to agriculture, living and inhabitants through destruction and pollution. In the above context, state and explain any five (5) effects of soil erosion. **10 marks**

- (14)** Agricultural measures of soil erosion control are a set of practices that help to reduce the rate of soil erosion. Contour farming and strip cropping are some of them.

Explain the concept and working principle of:

- (a)** Contour farming **5 marks**

- (b)** Strip cropping in soil erosion control. **5 marks**

- (15)** Identify and explain briefly five (5) class of soil degradation. **10 marks**

- (16) (a)** What is the biological way used for controlling the lantana camara which invade our forest?

- (b)** Pinpoint and explain any four (4) main ways of looking at land degradation and its impacts around it. **10 marks**

- (17) Fill the following table that shows the invasive tree species found in Rwanda forest:

| S/N | Botanical names        | Common names | Vernacular names |
|-----|------------------------|--------------|------------------|
| (a) | Acacia species         | .....        | .....            |
| (b) | Opuntia sp             | .....        | .....            |
| (c) | Caesalpinia decapetala | .....        | .....            |
| (d) | Eucalyptus             | .....        | .....            |
| (e) | .....                  | .....        | Amarebe          |
| (f) | .....                  | .....        | Ikibonobono      |
| (g) | Pinus sp               | .....        | .....            |
| (h) | Lantana camara         |              | .....            |

**10 marks**

- (18) (a) Identify five (5) preliminary studies conducted on the field before execution of bench terraces. **5 marks**
- (b) Farmer has a land of 28% of slope and want to make the contour line of that side, calculate the equidistance between two (2) contour lines in **meter** that farmer will use. **5 marks**





