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081105T4SAR

SUSTAINABLE AGRICULTURE FOR RURAL DEVELOPMENT LEVEL 5

AGR/OS/SARD/C C/02/5

Apply SARD Principles

November/December 2025

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TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION COUNCIL (TVET CDACC)

WRITTEN ASSESSMENT

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Time: 3 HOURS

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INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.
2. Answer **all** questions in section **A** and **ANY THREE (3)** questions in section **B**.
3. Marks for each question are indicated in the brackets.
4. Candidates are provided with a separate answer booklet.
5. Do not write on the question paper.

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This paper consists of THREE (3) printed pages
Candidates should check the question paper to ascertain that all
pages are printed as indicated and that no questions are missing.

SECTION A (40 MARKS)*Attempt ALL the questions in this section*

1. In the context of sustain alopment, the Sustainable Development Goals (SDGs) provide a global fram e-w o r k. S tate F O U R approaches to sustainable development outlined in the SDGs. (4 Marks)
2. Soil classification is essential for effective farm management. Outline F O U R factors used in classifying soils according to agro-ecological zones. (4 Marks)
3. Sustainable agriculture technologies help minimizes environmental impact. Name F O U R examples of sustainable agriculture technologies suitable f o r farms. (4 Marks)
4. Integrating farm enterprises can enhance productivity. State F O U R benefits of integrating crops and livestock in a farm system. (4 Marks)
5. Crop rotation is an example of sustainable agriculture technologies. List F O U R guidelines to consider when selecting crops for a rotation program. (4 Marks)
6. Managing external beneficial associations supports farm success. Mention F O U R types of external beneficial associates for a rural farm. (4 Marks)
7. Farming resources must be conserved for long-term viability. State F O U R farming resources that require careful management on a sustainable farm. (4 Marks)
8. Waste management is crucial under EMCA policies. Outline F O U R strategies for managing agricultural waste sustainably. (4 Marks)
9. Crop classification helps farmers and scientists understand plant relationships and optimize agricultural practices. Name F O U R crop families. (4 Marks)
10. The Sustainhood Framework emphasizes holistic approaches. State F O U R pillars of sustainable agriculture. (4 Marks)

SECTION B (60 MARKS)***Attempt Any THREE Questions in This Section***

11.

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- a. Understanding soil fertility is vital for sustainable crop production. Describe FIVE steps in the process of soil sampling and analysis. (10 Marks)

- b. Sustainable agriculture technologies adapt to emerging needs like climate change.

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Discuss FIVE ways to implement and maintain these technologies on a farm.

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(10 Marks)

12.

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- a. Farmers can make their farms stronger and more reliable by combining different farm enterprises (such as crops, livestock, and fish). Discuss FIVE ways a farmer can identify and successfully combine these enterprises. (10 Marks)

- b. Crop rotation calendars are tools for soil health. Explain FIVE benefits of formulating and practicing a crop rotation program seasonally. (10 Marks)

13.

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- a. Engaging external beneficial associations enhances farm innovation and sustainability. Describe FIVE strategies for effectively planning and evaluating partnerships with external beneficial associates. (10 Marks)

- b. Rural development relies on resource conservation. In FIVE ways to source,

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utilize, and conserve farming resources under EMCA policies (10 Marks)

14.

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- a. Crop rotation boosts soil health and farm resilience. Discuss FIVE ways on

how alternating crops seasonally contribute to soil health and farm

resilience.

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(10 Marks)

- b. Smallholder farms benefit from ICT in resource management. Describe FIVE roles of

ICT in enhancing sustainable practices.

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(10 Marks)