

MODULE III

BUILDING TECHNOLOGY LEVEL 5, LEVEL 6

CON/OS/BLD/CR/03/5/MA

Execute External Works

March/April 2026



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

WRITTEN ASSESSMENT

TIME: 2 HOURS

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.

This paper consists of THREE (3) printed pages

Candidate should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing.

SECTION A (40 MARKS)

Answer ALL questions in this section

1. A homeowner wants to plant a garden in their residential compound. Identify three factors that influence the selection of plants for landscaping in a residential compound. (3 Marks)
2. A landscape architect is evaluating different types of outdoor spaces. Differentiate between a natural landscape and a semi-natural landscape, giving one characteristic of each. (4 Marks)
3. When constructing a residential property, proper water management is essential. Briefly explain three purposes of a drainage system in external works. (3 Marks)
4. A designer is planning pathways and patios in a residential garden. Highlight four reasons why external paving is incorporated in landscaping works. (4 Marks)
5. Careful selection of the drainage system is required when planning drainage for a property. Outline four factors that should be considered when selecting an appropriate drainage system for a compound. (4 Marks)
6. A hotel wants to enhance both safety and aesthetics in its outdoor areas. Mention three types of external lighting that can be used in landscaping. (3 Marks)
7. A developer is securing a newly acquired property. Outline three reasons why fencing is necessary in such a property. (3 Marks)
8. John would like to develop a plot he owns in an urban area. Identify three types of gates he can install in the plot. (3 Marks)
9. During paving works, proper preparation of the base layer is essential. Highlight three roles of bedding in external paving works. (3 Marks)
10. Landscaping contributes significantly to the beautification of the built environment. List any four soft landscaping elements used for beautification. (4 Marks)
11. Different gate supporting systems offer specific functional benefits. Outline one functional advantage of each of the following gate supporting systems: (6 Marks)
 - a. Reinforced concrete (RC) columns
 - b. Steel stanchions
 - c. Stone piers

SECTION B (60 MARKS)

Answer THREE questions in this section.

12. Terracotta hotel is enhancing its outdoor areas to improve visitor experience.
- a. Discuss five key elements of landscaping they should consider when carrying out external works. (10 Marks)
 - b. Explain five principles of landscape design and describe how each could influence the final layout of the hotel's outdoor areas. (10 Marks)
13. Drainage systems are influenced by sewer arrangements.
- a. Discuss the following types of drainage systems: (9 Marks)
 - i. Combined system
 - ii. Separate system
 - iii. Partially separate system
 - b. Explain three places where inspection chambers should be located in a drainage system. (6 Marks)
 - c. Describe the process of excavating an open drainage channel, highlighting methods that minimize environmental impact. (5 Marks)
14. A contractor is required to construct an environmentally responsive external paved area within a residential compound.
- a. Describe the steps the contractor should follow, from initial site survey to completion, ensuring environmental sustainability. (10 Marks)
 - b. Discuss five best practices that should be observed when carrying out external paving works. (10 Marks)
15. Alice has been tasked with designing a gate for a newly acquired residential plot.
- a. Analyze five factors that should be considered when designing the gate. (10 Marks)
 - b. Explain how energy-efficient security systems can be integrated into the compound design, in reference to: (10 Marks)
 - i. Solar-powered security lighting.
 - ii. Low-voltage CCTV systems.

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