

073205T4BLD

BUILDING TECHNICIAN LEVEL 5

CON/OS/BUT/CR/7/5

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. Different types of drainage systems are used depending on site conditions. Identify TWO types of drainage systems. (2 Marks)
2. Your client wants you to landscape their lawn with softscaping materials. List THREE material you will use for soft scaping landscape. (3 Marks)
3. Inspection chambers are included in drainage layouts during construction of drainage system. Give TWO functions of an inspection chamber in a drainage. (2 Marks)
4. State FOUR ways to have an ecofriendly landscape. (4 Marks)
5. Different types of gates are used depending on the building type. State FOUR types of gates used in residential buildings. (4 Marks)
6. Design stage is a crucial stage in the construction of a drainage system. Outline FOUR factors that should be considered when designing a drainage system on a construction site. (4 Marks)
7. Health and safety must be considered during drainage construction. Explain THREE safety precautions that should be taken when installing a drainage system. (3 Marks)
8. Kerbs are used to define road edges and confining paving. A kerb stone measures $300\text{ mm} \times 150\text{ mm} \times 100\text{ mm}$. Calculate the number of kerbs required for a 120 m stretch of road if kerbs are laid lengthwise, allowing 5% for breakage. (4 Marks)
9. Landscaping using trees near buildings must carefully be conducted. List THREE environmental considerations when choosing trees for landscaping. (3 Marks)
10. Compaction improves soil performance under load. State TWO objectives of soil compaction. (2 Marks)
11. Live fencing is increasingly used in site boundaries where environmental sustainability and cost efficiency are priorities. Highlight THREE benefits of live fencing in relation to environmental sustainability. (3 Marks)
12. Landscaped outdoor spaces require regular maintenance. State THREE maintenance activities required to keep landscaped areas in good condition. (3 Marks)
13. Mulching is a common practice used in landscaping. Outline THREE benefits of mulching in landscaping. (3 Marks)

SECTION B (60 MARKS)

Attempt THREE questions in this section.

14. Tarmac is a widely used external paving material, especially in areas subjected to vehicular traffic.
- a. Explain TWO materials used as an external paving material. (4 Marks)
 - b. Discuss FOUR properties of tarmac that make it suitable for external paving. (8 Marks)
 - c. Discuss FOUR factors that affect the performance and durability of paving slabs. (8 Marks)
- 15.
- a. Masonry perimeter walls are used in residential, commercial, and institutional projects.
 - i. Explain FOUR advantages of masonry perimeter walls. (8 Marks)
 - ii. Discuss THREE limitations of masonry perimeter walls in large-scale developments. (6 Marks)
 - b. Wooden post fencing combined with chain link is commonly used in agricultural and semi-rural perimeter applications. Explain THREE advantages of wooden post and wire fencing in rural developments. (6 Marks)
16. Soft scaping is an essential component of landscape design.
- a. Discuss FOUR benefits of grassing in garden beautification. (8 Marks)
 - b. Explain THREE factors that influence the successful growth of flowers in a garden. (6 Marks)
 - c. Discuss THREE roles of garden furniture in landscape beautification. (6 Marks)
17. You are a site manager on a construction project for production of road kerbs.
- a. Explain FIVE types of road kerbs commonly used in road works. (10 Marks)
 - b. Discuss FIVE functions of road kerbs in relation to traffic control and drainage. (10 Marks)

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