

073205T4BLD

BUILDING TECHNICIAN LEVEL 5

CON/OS/BUT/CR/03/5/A

Execute Building Superstructure works

March/April 2025



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

WRITTEN ASSESSMENT

INSTRUCTIONS TO CANDIDATE

1. This paper consists of **TWO** sections: **A** and **B**.
2. Attempt **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
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. Setting of building is done by use of different tools that perform different tasks during the operation. List any FOUR tools that are commonly used during setting out a rectangular building. (4 Marks)
2. Structures are made up of different components. Differentiate between column and beam as used in building works. (4 Marks)
3. Concrete is a construction material made up of various constituents. Highlight any THREE constituents of concrete. (3 Marks)
4. Setting out of a structure can be done by use of different methods depending with the complexity of the building. Outline any TWO methods of setting out a building. (2 Marks)
5. Concreting is inevitable in construction works. Outline any FOUR functional requirements of a good concrete. (4 Marks)
6. Formwork is a temporary structure constructed to hold wet concrete and is made of different materials. Give any FIVE advantages of using timber formwork over steel formwork. (5 Marks)
7. During construction of a superstructure wall, it is necessary to incorporate DPC. List any FOUR properties of a DPC. (4 Marks)
8. Reinforcement bars are used during construction. Highlight THREE functions of Reinforcement bar in buildings. (3 Marks)
9. Curing of concrete increases the strength and durability. Give any THREE materials that are used for curing of concrete. (3 Marks)
10. Blocks and bricks can be laid in different bonding depending with the method of construction. Outline any THREE types of bonding. (3 Marks)
11. Concrete ratio is one of the factors that affects durability and strength of structures. Give any TWO ratios that are commonly used during concreting works. (2 Marks)
12. Beams play a vital role in the building. Outline any THREE functions of beams in a building. (3 Marks)

SECTION B (60 MARKS)

Attempt Any THREE Questions in This Section.

13. Staircases are set of steps that help occupants to access one level of a building to another.
- a) Describe any FIVE types of stairs that are used in buildings. (10 Marks)
 - b) Explain FIVE factors to consider when selecting type of stairs to use in a building. (10 Marks)
14. Walls are vertical structural elements that enclose or divides a space into different rooms or apartment in a building.
- a) Differentiate between load bearing and non-load bearing walls. (4 Marks)
 - b) Explain any THREE major types of wall openings. (6 Marks)
 - c) Describe any FIVE functional requirements of a superstructure wall. (10 Marks)
15. Formwork is a temporary structure used in construction to make work economical.
- a) Explain FIVE characteristics of a good formwork. (10 Marks)
 - b) Sketch a well labeled diagram of column formwork. (10 Marks)
16. The quality of concrete is affected by the ratio and the method of mixing applied during concreting.
- a) Explain SIX steps which are followed during the production of wet concrete. (12 Marks)
 - b) Describe FOUR parameters that are considered during the design of concrete mix. (8 Marks)