

073206T4BLD

BUILDING TECHNICIAN LEVEL 6

CON/OS/BUT/CR/01/6/A

Produce Building Drawings

Nov/Dec 2024



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

WRITTEN ASSESSMENT

Time: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. Marks for each question are indicated in the brackets.
2. The paper consists of **TWO** sections: **A** and **B**.
3. Candidates are provided with a separate answer booklet
4. **DO NOT** write on this question paper.

This paper consists of FOUR (4) 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)

Answer ALL the questions in this section

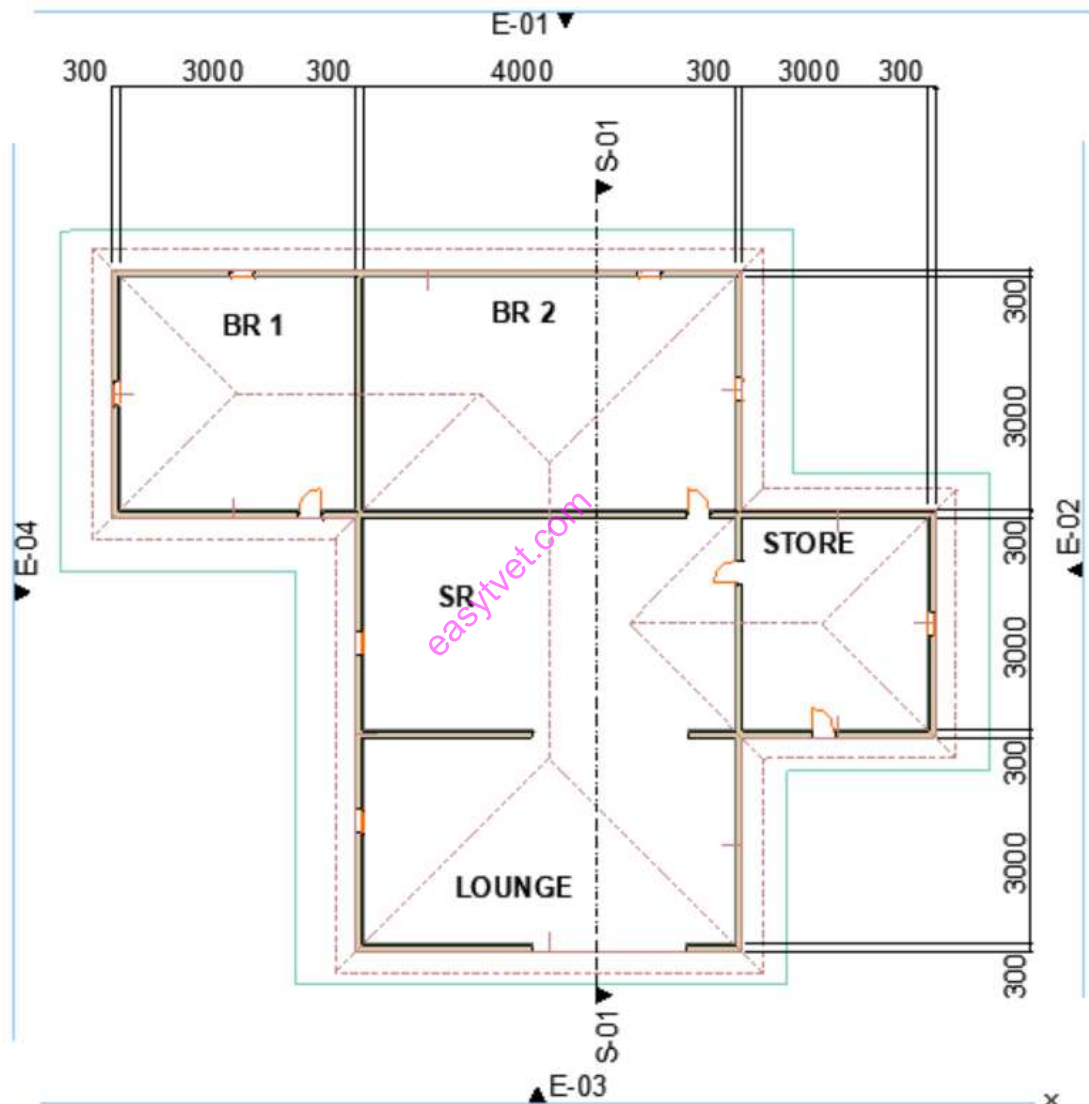
1. Architectural drawings are essential documents in building projects. Outline THREE purposes of architectural drawings in a building project. (3 Marks)
2. Structural drawings are used in large construction projects. List FOUR key elements that must be included in structural drawings. (4 Marks)
3. You have been tasked to produce engineering drawings for a new project. State THREE differences between civil engineering drawings and structural drawings. (3 Marks)
4. Electrical installation is key for the functionality of any building. Identify FOUR types of information commonly found in prepared electrical drawings. (4 Marks)
5. A plumbing layout is a requirement for building drawings approvals. Outline THREE importance of designing a plumbing layout for a residential building. (3 Marks)
6. You are working hand in hand with mechanical engineer to provide mechanical services in a commercial building. Identify FIVE mechanical services that can be provided in the commercial building. (5 Marks)
7. Architectural drawings contain different sections. Outline TWO importance of building sections in architectural drawings. (2 Marks)
8. While concreting three-storey building foundation, reinforcement bars are required. What is a bar bending schedule? (2 Marks)
9. Different plumbing fittings serve different purposes in a plumbing layout. State THREE common fittings found in a plumbing layout citing their uses. (6 Marks)
10. Accurate interpretation of drawings is a crucial step in ensuring the client's needs are met. Identify THREE common mistakes that may arise when interpreting structural drawings. (3 Marks)
11. CAD software's have been adopted in the production of building drawings. Outline FIVE advantages of using CAD in coming up with drawings. (5 Marks)

SECTION B: (60 MARKS)

Answer Any THREE Questions in This Section. Question 13 is Compulsory

13. The county government of Nairobi is constructing two bedroomed houses for its staff. The plan for the houses is as given in drawing NO. 1. Using CADD software draw and print the plan on A3 paper to a scale of 1:100. (20 Marks)

Drawing no.1



14. Elevations and sections in building drawings provide key information in building drawings. Draw and render elevations E1, E2, E3, and E4 and the section S-01. Print the drawings in A3 to a scale of 1:50. (20 Marks)
15. You have been contracted to produce structural drawings and a bar bending schedule for a proposed bungalow construction project.

- a. Describe FOUR considerations looked into when designing for structural elements. (8 Marks)
 - b. Explain SIX importance of preparing a bar bending schedule. (12 Marks)
16. You are planning the electrical system for a cozy one-bedroom house. Your understanding of the electrical layout and symbols used in electrical drawings is crucial for accurate communication and installation.
- a. Describe FIVE types of electrical drawings which can be utilized for a one bedroomed house. (10 Marks)
 - b. Sketch FIVE electrical symbols commonly found in electrical drawings while giving their importance in an electrical connection layout. (10 Marks)

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