

073206T4BLD

BUILDING TECHNOLOGY LEVEL 6

CON/OS/BUT/CR/01/6

Produce Building Drawings

March/April 2026



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

WRITTEN ASSESSMENT

TIME: 3 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 FOUR (4) 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. Reinforcement layouts ensure building stability. List THREE importances of a bar bending schedule in structural drawings. (3 marks)
2. Air quality affects comfort and health. Name TWO types of ventilation systems used in buildings. (2 marks)
3. Fire can occur at any time on site. Highlight FOUR types of firefighting equipment commonly used. (4 marks)
4. Pipes must suit their intended use. Give THREE factors considered when selecting pipe types. (3 marks)
5. Compliance with regulations benefits construction. Highlight THREE benefits of following building codes. (3 marks)
6. Plumbing systems use different types of joints. Name TWO common pipe joints used in plumbing. (2 marks)
7. Hot and cold-water systems serve different purposes in a building. Differentiate between the two water supply systems. (4 marks)
8. Electrical layouts must be clear for safety. Name FOUR symbols commonly used in electrical drawings. (4 marks)
9. Foundation drawings contain important construction details. List THREE details found on a foundation plan. (3 marks)
10. Buildings need mechanical systems for functionality. Identify FOUR services usually required. (4 marks)
11. Electrical wiring diagrams indicate connections in a building. Mention THREE items included in a wiring diagram. (3 marks)
12. Measurements in architectural drawings must be accurate. Give THREE types of dimensions used in architectural drawings. (3 marks)
13. Site plans organize construction tasks and resources. State TWO purposes of a site plan. (2 marks)

SECTION B (60 MARKS)*Answer any THREE questions in this section*

14. To a scale of 1:5, draw a section through a strip foundation using the following information: (20 marks)

- Strip footing — 800×1500 mm
- Hardcore — 300 mm
- Concrete slab — 150 mm
- Blinding — 50 mm
- Wall thickness — 200 mm
- Foundation depth — 200 mm
- DPC-1000G
- BRC-A142

Assume any other information.

15. To a scale of 1:10 draw and label a section through the manhole given the following information: (20 Marks)

- Manhole internal dimensions — $800 \text{ mm} \times 600 \text{ mm}$
- Concrete bed — 150 mm thick
- Concrete block wall — 150 mm thick
- Drain pipe — 150 mm diameter
- Benching — at 45° to horizontal
- Plaster — 12 mm thick
- Depth of manhole — 650 mm
- Manhole cover — 450×450 mm
- Top slab (precast) — 100 mm thick

Assume any other information.

16. The production of building drawings requires collaboration among different professionals and the preparation of various drawing types to communicate design intent clearly.

- a. Describe FIVE types of building working drawings used in construction projects. (10 Marks)
- b. Describe the role played by the following parties in the construction sector: (10 Marks)

- i. Architect
- ii. Structural Engineer

- iii. Contractor
- iv. Quantity Surveyor
- v. Client

17. Before construction can begin, building drawings must go through an approval process and follow a systematic architectural design procedure.

- a. Explain FIVE requirements that must be met before building drawings are approved for construction. (10 Marks)
- b. Discuss FIVE stages involved in the architectural design process of a building project. (10 marks)

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