

073206T4BLD

BUILDING TECHNICIAN LEVEL 6

CON/OS/BUT/CR/09/6A

INSTALL BUILDING SERVICES

Nov/Dec 2023



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

WRITTEN ASSESSMENT

TIME: 3 HOURS

INSTRUCTIONS TO CANDIDATE

1. This paper has two sections **A** and **B**. Attempt questions in each section as per instructions given in the section.
2. You are provided with a separate answer booklet.
3. Marks for each question are indicated in the brackets.
4. 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 pages are missing.

SECTION A: (40MARKS)

(Attempt all questions in this section.)

1. Outline three importance of installing building services. (3 Marks)
2. Highlight five advantages of installing permanent ventilation system in a building. (5 Marks)
3. Explain the two types of ventilation systems that can be installed in a building facility. (4 Marks)
4. As a Building technician you are required to install electrical wiring in a facility, identify any three factors you will consider in selecting the required cables. (3 Marks)
5. Outline two merits of sealing all exposed electrical conduits. (2 Marks)
6. Identify any six mechanical services that can be installed in a story building. (3 Marks)
7. Explain the use of architectural drawings in building drawings. (2 Marks)
8. Define and cite one example of structured cable design as used in the installation of CCTV and network services. (3 Marks)
9. Define the term 'electricity wiring systems.' (3 Marks)
10. Highlight any five components of a fire alarm system. (5 Marks)
11. State four factors considered when locating a manhole in a drainage system. (4 Marks)
12. Identify three faults likely to occur in a plumbing system. (3 Marks)

SECTION B: (60 MARKS)

This section consists of four (4) questions.

*Answer any **THREE** questions. All questions carry equal marks*

13. a. Discuss the installation procedure of conduit wiring system. (8 Marks)
b. Using a well labeled sketch draw a cross section through a manhole. (6 Marks)
c. Discuss three uses of a manhole. (6 Marks)
14. a. Discuss the following two methods of supply cable intake. (4 Marks)
i. Underground duct
ii. Overhead supply
b. Using well labeled sketches discuss each of the following features:
i. Radial circuit. (8 Marks)
ii. Ring circuit (8 Marks)
15. a. Define the terms LAN and WIFI as used in internet and connectivity. (4 Marks)
b. Discuss the criteria to be followed when designing CCTV installation. (10 Marks)
c. Use a schematic diagram to sketch the flow chart for CCTV installation. (6 Marks)
16. a. Discuss five functions of mechanical ventilation system. (10 marks)
b. Elaborate five differences between mechanical and natural methods of ventilation. (10 marks)

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