

073204T4PLM

PLUMBER LEVEL 4

CON/OS/PL/CR/03/4/A

INSTALL DRAINAGE SYSTEMS IN BUILDINGS

NOV/ DEC 2023



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

WRITTEN ASSESSMENT

TIME: 2 HOURS

INSTRUCTION TO CANDIDATE

- i. This assessment has two sections (A and B)
- ii. Provided with a separate answer booklet.
- iii. Candidate should not write on the question paper
- iv. Marks for each question are indicated in the brackets ()

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 (10 MARKS)

In this section, each question carries 1 mark.

1. What type of test is recommended for drainage pipework and fittings?
 - A. Pepper mint
 - B. Hydraulic
 - C. Smoke
 - D. Air
2. Identify the angle between the drains and inspection manholes
 - A. 45°
 - B. 90°
 - C. 135°
 - D. 180°
3. A trap that loses its seal is caused by _____?
 - A. Momentum
 - B. Induced siphonage
 - C. Capillarity
 - D. Compression
4. An AGDS soundness test should be carried out using:
 - A. Water
 - B. Air
 - C. Smoke
 - D. Compressed nitrogen
5. Which material is used for pipes which conduct waste?
 - A. Stainless steel
 - B. Copper
 - C. Ceramic
 - D. Plastic
6. _____ is the recommended gradient on a single stack installation for a 40mm waste pipe from the basin to the stack.
 - A. 8–18mm/m
 - B. 18–28mm/m

- C. 18–80mm/m
 - D. 18–90mm/m
7. Where would a plumber most likely find information on the type of plastic soil and vent pipe fittings for use on site?
- A. Building drawings
 - B. Material specification
 - C. Installation schedule
 - D. Site layout plan
8. A fitting used to secure a bib tap to a wall surface over a cleaner's sink is called:
- A. Back plate elbow
 - B. Straight tap connector
 - C. Bent tap connector
 - D. Flexible hose union
9. Name the capacity of a WC cistern when installed together with a new WC pan.
- A. 6.0 litre
 - B. 6.5 litre
 - C. 7.5 litre
 - D. 9.0 litre
10. Bottle traps tend to be specified because of their compact dimensions, identify one application.
- A. Washing machine
 - B. Pedestal Wash basin
 - C. Plastic Shower tray
 - D. Waste disposal unit

SECTION B (40 MARKS)

Attempt ALL questions in this section.

11. Define the following terms as used in drainage systems. (6 marks)
- a) Drain
 - b) Pipe
 - c) Drawing
12. Sketch the following symbols as used in drainage systems. (2 marks)
- a) Sink
 - b) Non-return valve
13. State three faults you are likely to fix in a household. (3 marks)
14. In an occupied dwelling, what should be a plumber's first action before carrying out soundness testing. (2 marks)
15. List two materials commonly used in rain water goods. (2 marks)
16. With the aid of a well labelled sketch differentiate between a Combined System and Separate System? (10 marks)
17. Name three tools and equipment that are mainly used in installation of any drainage system in a building. (3 marks)
18. State and explain three ways a trap could lose its seal. (6 marks).
19. Outline three types of WC/cistern combinations. (3 marks)
20. Highlight three properties of stainless-steel materials as used in drainage works. (3 marks)