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073105T4PLM

PLUMBER LEVEL 5

CON/OS/PL/CR/06/5

Maintain Plumbing Systems

July/August 2025

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. Answer all questions in section **A** and any **THREE** questions in section **B.**
4. Candidates are provided with a separate answer booklet
5. **DO NOT** write on this 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)

Answer ALL the questions in this section.

1. Functionality of a newly repaired plumbing system needs to be tested. Identify THREE tests you would perform on a new installation. (3 Marks)
2. A leaking elbow in a plumbing system can cause significant water losses. List THREE waterproofing materials you would use to correct the leakage. (3 Marks)
3. Plumbing faults lead to damage and malfunctioning of a system. State FOUR common signs that indicate potential plumbing system faults. (4 Marks)
4. Mrs. Stacy raised a complain of leaking storage tanks few months after installation. List THREE possible causes of the leakage. (3 Marks)
5. There are different parts in Kenya with salty water hence pipes are prone to corrosion and clogging.
    a. State THREE maintenance that can be practiced to avoid clogging in instant shower heads. (3 Marks)
    b. List THREE tools and equipment you would use during the maintenance in (i) above. (3 Marks)
6. Plumbing materials are prone to damage after installation. State FOUR causes of mechanical damage on installed plastic pipes. (4 Marks)
7. A kitchen sink in a residential building has failed to drain waste water properly. List down the steps you would follow to troubleshoot the fault. (4 Marks)
8. A plumber encounters many health and safety risks during plumbing operations. Identify THREE risks they face while maintaining plumbing systems. (3 Marks)
9. You conducted a regular inspection in a client's house and noticed that the wash hand basin was faulty. State FOUR factors that would determine whether it needs to be replaced instead of repaired. (4 Marks)
10. Tools and equipment make work easier when carrying out plumbing projects. List TWO functions of each the following tools as used in plumbing maintenance.
    a. Adjustable Wrench. (2 Marks)
    b. Claw Hammers. (2 Marks)
    c. Combination square. (2 Marks)

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SECTION B (60 MARKS)

Answer Any THREE Questions in This Section

11.

a. During repair work of a water distribution system, a plumber is required to carry out functionality test on the system to guarantee the client that all is well. Discuss FIVE potential consequences of not testing the functionality of a plumbing system. (10 Marks)

b. Corrosion occurs when old metal pipes rust on the inside after many years of water flow. It leads to serious problems including pipe breakage and even water contamination. Explain FIVE ways of preventing corrosion in metal pipes. (10 Marks)

12.

a. Proper repair procedures are important for maintaining the efficiency and longevity of plumbing systems. Identify TEN steps to follow when preparing for a smooth and safe repair of a clogged kitchen sink. (10 Marks)

b. Water leakage leads to economic loses. Describe FIVE steps involved in fixing water leak at a pipe joint in a plumbing system. (10 Marks)

13.

a. Air lock occurs when air is trapped in the pipes preventing water from flowing properly. Explain FIVE preventive measures to minimize the chance of an air lock in a plumbing system. (10 Marks)

b. Plumbers often work in challenging environments that can easily lead to potential harm or injury. Discuss FIVE Personal Protective Equipment that a plumber should adhere to while repairing a bathroom. (10 Marks)

14.

a. A plumber should determine and price materials needed for repairs. Explain FIVE steps followed when quantifying and costing materials required for plumbing repairs. (10 Marks)

b. In a plumbing workshop, there are a number of tools and equipment used for different functions. Discuss FIVE classifications of plumbing tools and equipment giving examples in each. (10 Marks)