

061005T4ICT

ICT TECHNICIAN LEVEL 5

IT/OS/ICT/CR/1/5

Perform Computer Networking

March/April 2026



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

WRITTEN ASSESSMENT

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATE

1. The 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 this question paper.

This paper consists of THREE (3) 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. A small office with five computers uses a network confined to one building. Name this type of network. (2 Marks)
2. In a star network, all communication passes through a central switch. Outline FOUR functions of this device. (4 Marks)
3. Describe the following terms as used in networking. (4 Marks)
 - (a) Bandwidth.
 - (b) IP address.
4. Differentiate between Transmission Control Protocol (TCP) and User Datagram Protocol (UDP). (4 Marks)
5. A coffee shop offering Wi-Fi to customers enjoys certain benefits over cables. Explain TWO advantages of a wireless network. (4 Marks)
6. For web browsing to work, computers and servers follow a common rule set. Mention ONE network protocol used for accessing websites. (2 Marks)
7. Working with network cables in an office involves certain risks. State FOUR safety hazards present during cable installation. (4 Marks)
8. When networking, it is important to identify the MAC address of each computer. Describe this MAC address as used in networking. (4 Marks)
9. Conducting post-installation testing after setting up a new network serves an important purpose. Outline FOUR reasons for conducting this test. (4 Marks)
10. Different network tasks require cables with different capabilities. Identify TWO common types of network cables. (2 Marks)
11. A bank connecting its branches across the country uses a specific large-scale network. Identify this network type. (2 Marks)

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

12.

- a) A network technician intends to acquire a transmission cable. Explain THREE factors that influence the choice of a transmission media. (6 Marks)
- b) A network administrator developed a network user manual. Explain FOUR uses of this manual. (8 marks)
- c) A computer technician installed network operating systems (NOS). Explain THREE functions of this operating system. (6 Marks)

13.

- a) Explain the functions of the following Network testing tools. (8 Marks)
 - i. Cable tester
 - ii. Volt meter
 - iii. Tester
 - iv. LAN tornado
- b) With the aid of a diagram in each case, describe the following network topologies (12 Marks)
 - i. Star
 - ii. Ring
 - iii. Mesh
 - iv. Hybrid

14.

- a) Describe each of the following commands as used when troubleshooting network connectivity issues. (8 Marks)
 - i. ping
 - ii. ipconfig
 - iii. tracert
 - iv. nslookup
- b) Explain FOUR routine maintenance activities that help ensure a network remains reliable and secure. (8 Marks)
- c) Distinguish between dynamic and static IP addressing. (4 Marks)

15.

- a) Explain the following International Standards Organisations (ISO) open systems interconnections layers. (8 Marks)
 - i. Application;
 - ii. Transport;
 - iii. Presentation;
 - iv. Data link.
- b) A data communication system is made up of several components. Outline FOUR of these components. (4 Marks)
- c) A trainee during training has learnt computer networking. Explain FOUR benefits of this computer networking. (8 Marks)