

061206T4CYB

CYBERSECURITY TECHNICIAN LEVEL 6

SEC/OS/CS/CR/03/6/A

PERFORM COMPUTER NETWORKING

Nov. / Dec. 2023



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

WRITTEN ASSESSMENT

Time: 3 Hours

INSTRUCTIONS TO CANDIDATES

1. This paper has two sections **A** and **B**.
2. You are provided with a separate answer booklet.
3. Marks for each question are as indicated.
4. Do not write on the question paper.

**This paper consists of 4 printed pages.
Candidates should check the question paper to ascertain that all the pages are printed as
indicated and that no questions are missing.**

SECTION A (40 MARKS)

Answer all the questions in this section

1. Define the following terms as used in computer network. **(4 marks)**
 - a) Network segmentation
 - b) Network optimization
2. List FIVE network components that a network designer would recommend to a client after conducting a network site survey. **(4 marks)**
3. Describe TWO ways of scheduling network updates. **(4 marks)**
4. State FOUR functions of network operating system. **(4 marks)**
5. Describe THREE types of performance tests that can be performed on an already installed network. **(6 marks)**
6. Differentiate between client-server and a peer-to-peer network model. **(4 marks)**
7. List FOUR factors that affects network performance. **(4 marks)**
8. Describe the TWO categories of networking transmission media. **(4 marks)**
9. Describe any THREE types of network users within an organization. **(6 marks)**

SECTION B: (60 MARKS)

Answer any THREE questions in this section

- 10. a)** Discuss any FIVE types of network protocols that are used to facilitate communication within the network. **(10 marks)**
- b)** Explain THREE benefits of sub-netting in networking. **(6 marks)**
- c)** Explain the meaning of the following networking terms. **(4 marks)**
- Data Encryption
 - Firewall
- 11. a)** As a network administrator, you have the task of selecting the appropriate transmission media for a new network installation. Discuss any FOUR factors that you need to consider when selecting on the transmission media to use. **(8 marks)**
- b)** Use the diagrams below to answer the question that follows.



Figure 1

- Identify the diagram in figure 1 as used in networking. **(1 mark)**
- Explain how the diagram is used in a network environment. **(2 marks)**



Figure 2

- i. Identify the diagram in figure 2 as used in networking **(1 mark)**
- ii. Explain how the diagram is used in a network environment. **(2 marks)**

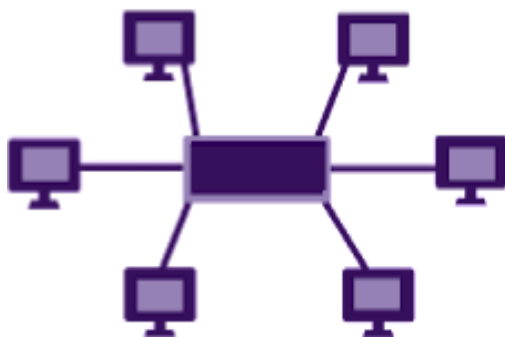


Figure 3

- i. Identify the diagram above as used in networking **(1 mark)**
- ii. Explain how the figure identified above is used in a network environment. **(2 marks)**
- c) State any THREE characteristics of a local area network. **(3 marks)**

12. a) Discuss THREE reasons for terminating network cables according to networking standards. (6 marks)

b) Describe the function of the following network devices. (6 marks)

- i. Gateway**
- ii. Switch**
- iii. Wireless Access Point**

c) As the Network administrator, you are planning to organize a training for the users on how to manage the recently installed network in the company. Explain FOUR training methods you would employ. (8 marks).

13. As a cybersecurity analyst, you are investigating a network security breach in ABC Company. The company has reported several security issues and vulnerabilities in the recent past.

- a) Discuss any FIVE likely causes of the reported security breaches. (10 marks)**
- b) Discuss any FIVE types of network documents that a company should safely keep. (10 marks)**

END